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ABSTRACT

An evaluation assessed the simulation game called "Operation Moonvigil". The program consisted of eight daily five minute telecasts followed by 30 minutes of classroom activities based on information communicated during the telecast. Teachers, pupils, and non-participant observers provided data through questionnaires, diaries, and observation records. Student participation was high on the first five days, but lower on the final two. Three-quarters of the classes had initial difficulty in following directions, but improvement occurred later. Teacher participation ranged widely from total withdrawal to major modification of the game. Teachers who attended pre-game workshops rated them highly. They also felt that students achieved the objectives of the game and said they would recommend "Moonvigil" to their teaching colleagues and play the game again. Teachers did express concern about the low level of students' television listening and group interaction skills and also recommended that the pre-game workshops be expanded and made mandatory. (Author/PB)

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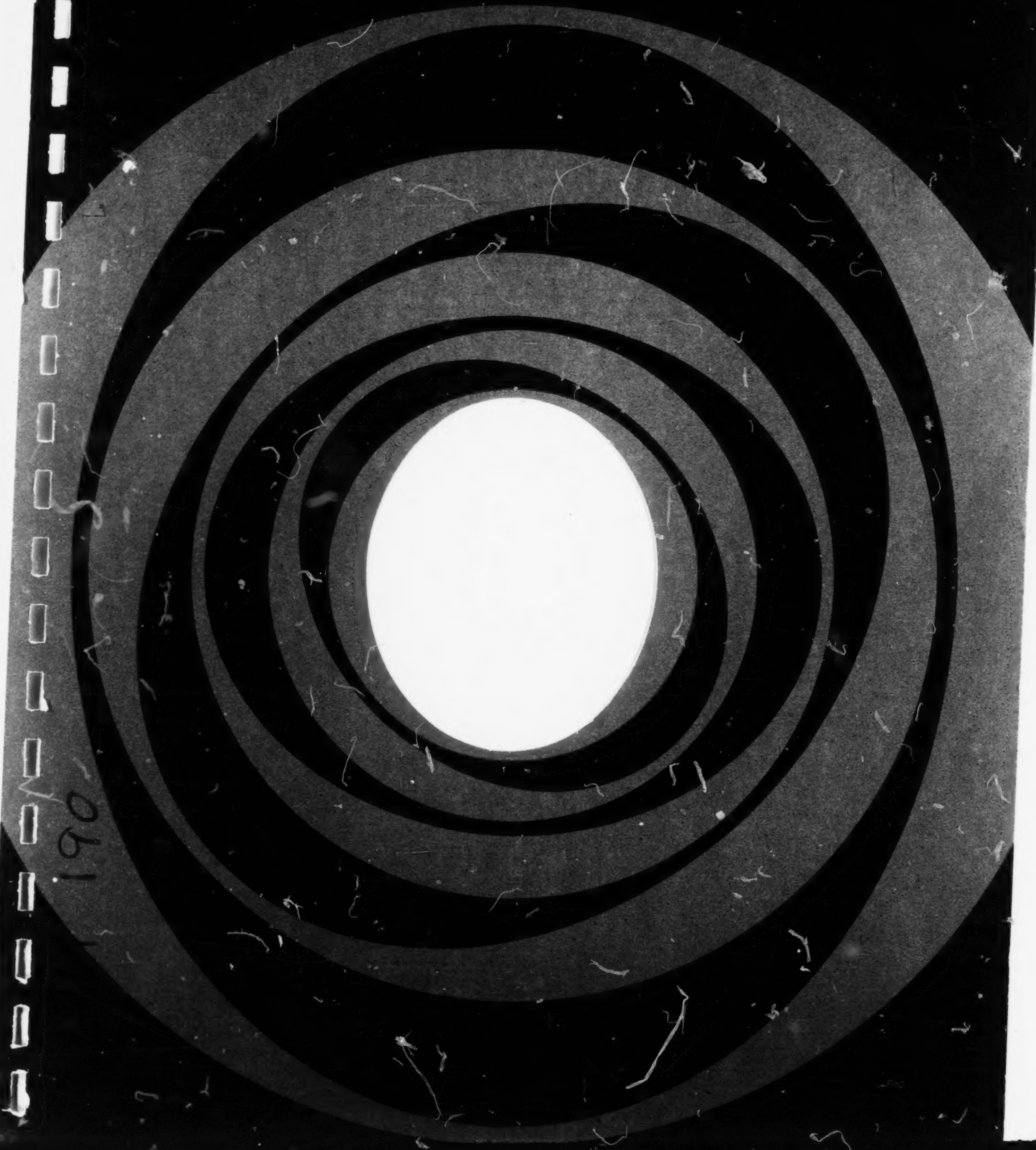

190

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Number 14

An Evaluation of Operation Moonvigil

January, 1972

Prepared by
Albert E. Virgin,
Research & Evaluation Services.

For the
Research and
Development Branch

The Ontario Educational
Communications Authority

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We wish to express our appreciation to all of the classroom teachers and pupils in public and separate schools across Ontario, who took the time to provide us with comprehensive and detailed information, and their opinions about Operation Moonvigil as played in their classrooms.

ABSTRACT

This report presents the results of an evaluation of the simulation game Operation Moonvigil. The evaluation is based on the experiences of children and teachers in Ontario classrooms.

Data was gathered from three sources - teachers, pupils and non-participant observers. A 50-item Teacher Questionnaire and a 13-item Pupil Questionnaire plus a pupil diary and an observer's daily record were developed. Thirteen non-participant observers gave detailed descriptions of events in 13 classrooms in the metropolitan area. This complemented the information which could be gathered through the mailing of questionnaires.

According to the observers, during the first five Moondays, pupil involvement was high and the children appeared to enjoy their activities. However, on Moondays 6 and 7, pupil attention dropped noticeably. Approximately three-quarters of the classes experienced some difficulty in following instructions in their Emergency Procedures Kit on the first two Moondays. In fact, 20% of the classes were not able to follow instructions at all on those days. The Space Navigation Game tended to be confusing and hospitalization was carried out according to instructions in only four classrooms. However, 12 of 13 classrooms did go through some kind of hospitalization procedure. Turning to debriefing and reflection, again pupils tended to be well-involved initially, but on the last day, interest waned. By Reflection Day 1, only five of the 13 classes remained. From the observer's records, it is obvious that there was a wide degree of teacher participation, some remaining totally withdrawn, while others made major modifications in the game. Individual observer summaries are included in the text.

The Teacher Questionnaire response rate was 46%. Slightly more than half the teachers attended a workshop prior to the game, and gave it a high rating. They also rated the Teacher's Guide and the Emergency Procedures Kit highly. The majority of teachers spent less than four hours in preinvolvement activities and in the future would include the following; introducing specific vocabulary, playing simulation games, conducting role-playing exercises and encouraging research projects. The teachers expressed concern about the low level of development of the children's television listening and reading for action skills and in particular, group interaction skills. The teachers' rating of the success of the Moondays was similar to the pattern in the observed schools. During debriefing, a wide variety of institutions and corresponding needs and roles were mentioned. Eighty percent of the responding teachers felt their pupils did achieve the objectives of the game and thought the time and effort of the pupils was worthwhile. More than 90% would recommend Moonvigil to their

peers and would play the game again.

Based on the pupil data, the children enjoyed assuming the role of a crew stranded on the moon. They felt that they had acquired knowledge and the game was a change from usual classroom routines. Although only a few stated the reason for playing Moonvigil was to learn about institutions, almost all pupils were able to identify at least three or four needs of a group stranded on a deserted island and were able to suggest corresponding roles.

It was recommended that the teacher's workshop be modified to include (a) detailed study and discussion of the Teacher's Guide, (b) suggestions and materials for specific preinvolvement activities, and (c) experience which teachers can use to assist pupils to conceptualize. The workshop should also be mandatory so that teachers will be fully aware of the demands of the game and take steps to avoid conflicting activities during Moonvigil.

TABLE OF CONTENTS

Page Number

INTRODUCTION AND PROCEDURE 1
    Sample Selection

AN OVERVIEW OF THE OBSERVED CLASSROOMS 5
    The Setting
    Involvement Ratings
    Frequency of Questions and Enjoyment
    First Day Teacher Tasks
    Daily Events
    Debriefing
    Reflection
    Teacher Participation and Modifications
    Grouping
    Leadership
    Interaction
    Comparing the Three Groups
    Summary

THE THIRTEEN CLASSROOMS 35
    Apple Elementary School
    Beech Elementary School
    Cedar Elementary School
    Doum Elementary School
    Elm Elementary School
    Fir Elementary School
    Juniper Elementary School
    Tamarack Elementary School
    Maple Senior Public School
    Pine Elementary School
    Oak Elementary School
    Silver Birch Elementary School
    Willow Elementary School

ANALYSIS OF THE TEACHER QUESTIONNAIRES 103
    Response Rate
    Background and Setting
    Workshop Participation
    Materials
    Preinvolvement Activities
    First Seven Moon Days
    Debriefing and Reflection
    Pupil Involvement
    Teacher's Role

Page Number

ANALYSIS OF THE TEACHER QUESTIONNAIRES (Continued)
- Future Use of Moonvigil
- Preinvolvement Activity Time Related to the Success of the Game
- Summary

PUPIL QUESTIONNAIRES AND DIARIES 148
- Jupiter Elementary School
- Venus Elementary School
- Mars Elementary School
- Mercury Elementary School
- Saturn Elementary School
- Krypton Elementary School
- Summary

CONCLUSIONS 167

APPENDIX A 169

APPENDIX B 186

APPENDIX C 191

LIST OF TABLES

Table Page

1 School Grades Observed 5

2 Sex Of Teacher 5

3 Number And Sex Of Pupils 5

4 Physical Facilities 6

5 Television Picture 6

6 Television Sound 6

7 Pupils' Response Five Minutes Prior to Each Broadcast 7

8 Pupils' Response During Each Broadcast 7

9 Pupils' Response During Half Hour of Follow-Up 7

10 Enjoyment 8

11 EP Kit Set Up Prior To Broadcast 8

12 Division Into Crews Prior to Boradcast 8

13 Scenario To Introduce Game 9

14 Ask Teacher's Help Re Division Into Groups 9

15 Help Re Division Provided 9

16 Ability To Follow Instructions In EP Kit 9

17 Pupils Go Directly Into Groups Prior To Each Broadcast 10

18 Blue Group Starts Food Distribution Prior to Broadcast 10

19 Blue Group Starts Daily Report Prior To Broadcast 10

Table Page

20 Red Group Countdown Prior To Broadcast 10

21 Ask Teachers Help - Division Into Orange Group 11

22 Help Re Division Into Orange Group Given 11

23 Red Group Prepared And Able To Receive Code 11

24 Instructions For Space Navigation Confused 12

25 Opportunity For All To Be Navigator 12

26 Blue Group Award Extra Rations To Winners 12

27 Hospitalization According To Instructions 13

28 Reaction To Hospitalization 13

29 Crews Changed Jobs 13

30 Shown How To Perform New Jobs 14

31 Removal Of Materials Prior To Debriefing Day 1 14

32 Clarification Of Instructions 15

33 Each Pupil Interview Two Others 15

34 Pupils' Response During Broadcast 15

35 Pupils' Response During Follow-up 16

36 Response And Interaction During Discussion Of Interviews 16

37 Response To Teacher Reading List 16

38 Discussion Of Similarities And Differences 16

39 Time Required For Interviews 17

40 Length Of Debriefing 17

Table Page

41 Teachers Refer To Mission Control 18

42 Teachers Ask Pupils To Recall Events Using Log Sheets 18

43 Teachers Ask Questions Pertinent To Each Moonday 18

44 Teachers Make Notes On Board For Debriefing Day Three 18

45 Length Of Debriefing 19

46 Involvement Of Pupils 19

47 Identification Of Needs 19

48 Understanding Need For Structures 20

49 Understanding Need For Roles 20

50 Teachers' Role - Discussion 20

51 Teachers' Role - Group Leader 20

52 Identification Of Basic Needs - Society 21

53 Research Groups Formed 21

54 Teacher's Role On Each Day 22

55 Preinvolvement - Immediately Prior To Broadcast 22

56 Modification Of Time On Each Day 22

57 Modifications Of Materials On Each Day 23

58 Tasks Not Undertaken On Each Day 23

59 Other Modifications 23

60 Division Into Groups 24

61 Leaders Emergence 24

Table Page

62 Leadership 25

63 Understanding Instructions 27

64 Following Instructions 28

65 Interest Level 29

66 Involvement In Tasks 30

67 Role Playing 31

68 Participation In Duties Assigned To Groups 32

69 Conflicts Within Groups 33

70 Resolution Of Conflicts 33

71 Grade Level 104

72 Location Of Schools 104

73 Teaching Style 104

74 Frequency Of Using T.V. 105

75 Number of Teachers Who Had Participated In A Simulation Game 105

76 Number of Teachers Who Conducted A Simulation Game In Their Classroom 106

77 Source Of Information About Moonvigil 106

78 Reasons For Using Moonvigil 107

79 Physical Setting 108

80 Rating Of Suitability Of Room 109

81 Reasons For Unsuitability Of Room 109

82 Number Of T.V. Receivers 109

83 Viewing Time 110

Table Page

84 Rating Of Teacher Confidence And Competence As A Result Of Attending Workshop 110

85 Most Helpful Features Of Workshop 111

86 Least Helpful Features Of Workshop 112

87 Rating Of Teacher's Guide In Providing Confidence And Competence 113

88 Rating Of Materials In E.P. Kit 114

89 Amount Of Time Spent In Preinvolvement 115

90 Preinvolvement Activities And Rating Of Involvement 115

91 Preparation Suggestions 116

92 Rating Of Preinvolvement 117

93 Rating Of First Seven Moon Days 118

94 Reasons For Ratings 119

95 Average Number Of Questions 120

96 Kinds Of Questions 121

97 Rating Of Debriefing And Reflection 122

98 Rating Of Pupil Involvement During Debriefing 122

99 Number Of Reflection Days Planned 123

100 Reflection Activities 123

101 Class Conclusions 125

102 Concept Of Institutions 127

103 Other Institutions Identified 127

Table Page

104 Pupil Involvement As A Function Of Achievement And Motivation 128

105 Change Of Pupil Interest 129

106 Number Of Pupils Who Carried Out Duties In E.P. Kit 129

107 Pupil Role Assumption 129

108 Achievement Of Objectives 130

109 Time And Effort Of Pupils Worthwhile 131

110 Teacher Insights About Their Pupils 131

111 Frequency Of Initiating Interaction During Each Moon Day 133

112 Teachers' Role As Observer 134

113 Frequency Of Limiting Debriefing Role 135

114 Moonvigil Considered For Use With Another Class 136

115 Moonvigil Recommended To Other Teachers. 136

116 Reasons For Recommending Moonvigil 136

117 Interested In Using Other T.V. Programs 138

118 Kinds Of Programs Desired 138

119 Success Of Preinvolvement Activities 140

120 Success Of Moondays Related To the Three Preinvolvement Groups 141

121 Frequency Of Role Assumption By The Three Preinvolvement Groups. 142

122 Time And Effort To Achieve Objective Rating By The Three Preinvolvement Groups 143

Table Page

123 Rating Of Success Of Debriefing By Three Preinvolvement Groups. 144

124 Rating Of Reflection By Three Preinvolvement Groups 144

125 Number Of Reflection Days Planned By Three Preinvolvement Groups 145

126 Sex of Pupils 148

127 Grade Level 148

128 Group Membership 148

129 Responses To The Stimulus "Moonvigil" 149

130 Pupils Afraid They Would Not Be Rescued 150

131 Reasons For Being Afraid 150

132 Reasons For Not Being Afraid 151

133 Things Pupils Would Do If Stranded On Uninhabited Island . . . 152

134 Reasons Why Three Groups Created 154

135 Number Of Groups Pupils Would Create 156

136 Reasons Why Pupils Liked The Game 157

137 Reasons Why Pupils Disliked The Game 159

138 What Pupils Thought Was Purpose Of Moonvigil 160

139 Pupil Enjoyment 162

INTRODUCTION AND PROCEDURE

This report presents the results of an evaluation of the simulation game entitled "Operation Moonvigil". The evaluation is based on the experiences of children and teachers in Ontario classrooms.

The game was developed and produced by the Ontario Educational Communications Authority and broadcast over Channel 19 and several other channels across the province in November, 1971. Briefly, the program consists of eight daily five-minute telecasts followed by 30 minutes of classroom activities based on information communicated during the telecast. The first seven days involved the playing of the simulation game; on the eighth day the pupils, with the assistance of the teacher who has played a fairly passive role up to this point, begin a series of debriefing exercises. Debriefing is continued for two additional days beyond the last telecast. At the beginning of the third week, reflection activities are initiated by the teacher. The purpose of these activities is to allow the children to apply the concepts discovered during the playing of the simulation game. The extent of these activities depends upon pupil and teacher interest. Additional detail about the game may be obtained from the OECA Research and Development Branch.

As stated in the report of preliminary testing*, "the greatest challenge to a game's evaluation lies in determining what learning has taken place" (pg.23). The principal focus of this section will be to describe the methodology we employed to determine what happened to pupils and teachers in classrooms where Moonvigil was played. It was decided to gather data from three sources, teachers, pupils and non-participant observers.

The following instruments were developed to gather data from the above sources:

(1) The Teacher Questionnaire was comprised of 50 items, both open- and closed-ended, which requested information in the following areas:

- Background information, e.g. grade, school location, previous use of T.V., type of room used, number of T.V. receivers.
- Opinion of OECA workshops.
- Opinion of Moonvigil materials.
- Kinds of pre-involvement activities used and ratings of the success of the game for each Moon Day.

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* "A Report Concerning Test Results And Evaluation of The OECA Simulation Project 'Moonvigil'", Anna Prodanou, OECA, Research and Development Branch, No date. This report also contains a review of the literature of simulation games, including their function.

- Rating of pupil involvement during the game.
- Kinds of activities during debriefing and reflection days.
- Teacher's role.
- Future use of Moonvigil.

A copy of the questionnaire may be found in Appendix A.

(2) The Pupil Questionnaire consisted of 13 items, the majority of which were open-ended. The pupils were asked to indicate, for example, their likes and dislikes of Moonvigil; why they thought Mission Control created three groups; what the most important jobs were in their crew; what they thought they were supposed to learn from playing Moonvigil. The complete questionnaire is presented in Appendix B.

(3) The Pupil Diaries were completed by a different and smaller sample of pupils each day after playing the game. The pupils were given the following hints for keeping their diaries:

(a) Write in the diary every day, as soon after the game as you can.
(b) The most important things I want to know are what you thought about the game, your feelings about Moonvigil and your ideas about playing Moonvigil.
(c) Use your own words, as if you were talking to a friend.
(d) Write as much as you want to about Moonvigil and if you need more space, write on the backs of the pages.
(e) If you would like to draw pictures in addition to what you write to illustrate your ideas, you may do so.
(f) Keep your diary to yourself.
(g) Be honest and frank. I am the only person who will read your diary and remember, you don't even put your name on it.
(h) Begin with Day 1 after you have played the first day of Moonvigil.

A sample diary may be obtained from the Research and Development Branch of OECA.

(4) The Observer's Daily Record. During each day of Moonvigil, including debriefing and reflection, each observer was given a booklet which provided a brief summary of the events to occur on that day and a list of activities to watch for during the 45 minute period of observation. The observers were asked to keep brief notes during the above time and to then write a detailed report following the conclusion of the game. Activities typically included in their reports each day were descriptions of the teacher's role; any evidence of the game being modified; evidence as to whether the children enjoyed themselves. A copy of the observers' daily record for Moon Day 1 may be found in Appendix C. The complete set of observers' daily records may be obtained from the Research and Development Branch of OECA.

Sample Selection

To complement the information which could be gathered relatively easily through the mailing of questionnaires to teachers and their pupils across the province, it was proposed and accepted that non-participant observers be placed in a number of schools within the metropolitan area. From 70 applicants, Research and Evaluation Services interviewed and selected 12 people with some university training and who appeared to have an objective outlook.

The above group and a number of OECA staff were given a training program which included theory of perception and its application to systematic observation, review of Moonvigil and the role of the observer, examination of the observers' daily record forms, plus a visit to the classroom to which each was assigned.

The observers' records were returned daily to OECA where an individual debriefing occurred.

The sample of teachers and pupils from whom data were gathered can be divided into three groups. In each case, sets of questionnaires were mailed either directly to the teacher or to the principal if a name was not known. Addresses were obtained from the Utilization Section of OECA and constituted over 90% of the people who had placed orders by November 10.

Group 1. The thirteen teachers included in this group were all from the metropolitan Toronto area. The schools represented various geographical areas from the inner-city to the suburbs. Both public and separate schools were included. Each teacher, when contacted through his principal, agreed to have an observer in his classroom during Moonvigil.

Six pupils in each of these classrooms were asked to keep diaries. The teacher was instructed to select one pupil from each of Red, Blue and Orange groups from each of the two crews and give them a diary which had been brought to the school by the observer.

Each of the 13 teachers in this group, was mailed a Teacher Questionnaire.

Group II. Ten teachers and 60 pupils were included in this group. The teachers were selected randomly from lists of names submitted to OECA by the Department of Education Regional Consultants and included people from all parts of the province.

As in Group I, each teacher received a Teacher Questionnaire, and six pupils in each classroom were asked to keep a diary of their feelings and experiences during Moonvigil. Again, each teacher was asked to select a pupil from each of Red, Blue and Orange Groups from each of the two crews to keep a diary.

Group III. This group consisted of 216 teachers throughout the province, each of whom was mailed a Teacher Questionnaire and six pupil questionnaires on November 16th., 1971. The teacher was asked to select six pupils, one from each of Red, Blue and Orange groups in each of the two crews to complete the pupil questionnaire. A total of 1296 pupil questionnaires were distributed.

Teachers in each of the three groups were asked to return all materials to Research and Evaluation Services by Friday, December 3rd., 1971.

AN OVERVIEW OF THE OBSERVED CLASSROOMS

In this chapter, the results from the individual observer's daily records have been combined to present an overview of what happened in the classrooms where a non-participant observer was present.

The Setting

The sample for observation consisted of thirteen classes with a grade range from 4 to 8. Almost half of the schools used Grade 6 classes (TABLE 1). Ten of the teachers involved were male (TABLE 2), while the total sample of 410 children were almost equally divided between male and female (TABLE 3). Ten of the classes (77%) used traditional classrooms, one used an open area, and two used specialized rooms containing piano, art supplies, etc. (TABLE 4).

TABLE 1

SCHOOL GRADES OBSERVED

Grade	Number	Percent
4,5,6	2	15.4
5	1	7.7
6	6	46.1
7	2	15.4
8	2	15.4

TABLE 2

SEX OF TEACHER

Sex	Number	Percent
Male	10	76.9
Female	3	23.1

TABLE 3

NUMBER AND SEX OF PUPILS

Sex	Number	Percent
Male	210	51.2
Female	200	48.2
Total	410	

TABLE 4

PHYSICAL FACILITIES

Type	Number	Percent
Traditional Classroom	10	76.9
Open Area	1	7.7
Gymnasium	0	0
Specialized Room	2	15.4

The television picture was clear in an average of 85.4% of classrooms over 7 days, and the sound was clear in an average of 89.8% (TABLE 5 and TABLE 6).

TABLE 5

TELEVISION PICTURE

	Days 1 - 7
Clear	85.4%
Unclear	14.6%

TABLE 6

TELEVISION SOUND

	Days 1 - 7
Clear	89.8%
Unclear	10.2%

Involvement Ratings

In the five minutes prior to broadcast, pupils appeared to have reached a peak of involvement, on Moonday Three when 61.6% were well-involved. The corresponding low point was on Moonday Six when 41.7% were poorly or not at all involved (TABLE 7).

TABLE 7

PUPILS' RESPONSE FIVE MINUTES PRIOR TO EACH BROADCAST

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Very involved 1	1	7.7	3	23.1	5	38.5	1	7.7	2	15.4	1	8.3	1	8.3
2	4	30.8	3	23.1	3	23.1	5	38.5	3	23.1	3	25.0	2	16.7
3	6	46.1	6	46.1	3	23.1	3	23.1	7	53.8	3	25.0	6	50.0
4	2	15.4	1	7.7	1	7.7	1	7.7	0		2	16.7	1	8.3
Not involved 5	0		0		1	7.7	3	23.1	1	7.7	3	25.0	2	16.7

Involvement during the broadcast was high for Moondays One to Four, while Moonday Six represents a low point (TABLE 8).

TABLE 8

PUPILS RESPONSE DURING EACH BROADCAST

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Very involved 1	4	30.8	6	46.1	8	61.5	4	30.8	4	30.8	3	25.0	3	25.0
2	6	46.1	5	38.5	3	23.1	6	46.1	5	38.5	1	8.3	5	41.7
3	3	23.1	1	7.7	2	15.4	3	23.1	4	30.8	7	58.3	1	8.3
4	0		1	7.7	0		0		0		1	8.3	3	25.0
Not involved 5	0		0		0		0		0		0			

During follow-up activities there is a somewhat larger spread of involvement, with a definite peak on Moonday Five, when 84.6% were well-involved, and a low point on Moonday Seven, when 33.4% were poorly involved (TABLE 9).

TABLE 9

PUPILS' RESPONSE DURING HALF HOUR OF FOLLOW-UP

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Very involved 1	3	23.1	4	30.8	3	23.1	3	23.1	8	61.5	1	8.3	1	8.3
2	3	23.1	4	30.8	5	38.5	5	38.5	3	23.1	3	25.0	3	25.0
3	5	38.5	5	38.5	4	30.8	4	30.8	1	7.7	5	41.7	4	33.3
4	2	15.4	0		1	7.7	1	7.7	1	7.7	3	25.0	2	16.7
Not involved 5	0		0		0		0		0		0		2	16.7

Frequency Of Questions And Enjoyment

Some questions were asked in some classrooms on all Moondays, although on the first day, three classes had no questions asked. During the first two Moondays however, in six classes six or more questions were asked. For the remaining days, on the average there were no questions asked in seven classrooms, and in those remaining, there were less than five. It is also worth noting that on Day Five the largest percentage of pupils (10 classes) asked no questions of the teacher since this is also the day on which most observers (84.6%) rated their class as enjoying their activities (TABLE 10).

TABLE 10

ENJOYMENT

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Yes	7	53.8	8	61.5	9	69.2	7	53.8	11	84.6	6	50.0	7	58.3
No	2	15.4	2	15.4	2	15.4	3	23.1	2	15.4	5	41.7	1	8.3
Qualified	4	30.8	3	23.1	2	15.4	3	23.1	0		1	8.3	4	33.3

First Day Teacher Tasks

A very large percentage of teachers (92.3%) set up the EP kits and divided their classrooms into two crews (84.6%) prior to broadcast on Moonday One (TABLES 11 & 12). About three-quarters of the teachers used the scenario to introduce the game (TABLE 13). Although only 23% were asked by their classes for help in dividing into Red and Blue groups, 38% of teachers provided help (TABLES 14 & 15).

TABLE 11

EP KIT SET UP PRIOR TO BROADCAST

	#	%
Yes	12	92.3
No	1	7.7

TABLE 12

DIVISION INTO CREWS PRIOR TO BROADCAST

	#	%
Yes	11	84.6
No	2	15.4

TABLE 13

SCENARIO TO INTRODUCE GAME

	#	%
Yes	10	76.9
No	3	23.1

TABLE 14

ASK TEACHERS HELP RE DIVISION INTO GROUPS

	#	%
Yes	3	23.1
No	10	76.9

TABLE 15

HELP RE DIVISION PROVIDED

	#	%
Yes	5	38.5
No	8	61.5

Approximately 75% of classes experienced at least some difficulty in following instructions in their EP kits on both Moonday One and Moonday Two (TABLE 16). Seventy-seven percent of the classes went into their groups prior to broadcast on Moonday Two (TABLE 17). Most of the Blue groups did not start food distribution prior to broadcast (TABLE 18) or start their daily reports (TABLE 19). Red group started countdown prior to broadcast on Moonday Two in 38.5% of classes (TABLE 20). Only 15% of the classes asked their teacher for help in dividing into Orange group (TABLE 21), and 15% of the teachers gave help (TABLE 22). Red group was prepared and able to receive the code in 92% of classes on Moonday two (TABLE 23).

Daily Events

TABLE 16

ABILITY TO FOLLOW INSTRUCTIONS IN EP KIT

	Moonday One		Moonday Two	
	#	%	#	%
Yes	2	15.4	3	23.1
No	2	15.4	3	23.1
Qualified Yes	9	69.2	7	53.8

TABLE 17

PUPILS GO DIRECTLY INTO GROUPS PRIOR TO EACH BROADCAST

	Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%
Yes	10	76.9	9	69.2	10	76.9	10	76.9	10	83.3	10	83.3
No	3	23.1	4	30.8	3	23.1	3	23.1	2	16.7	2	16.7

TABLE 18

BLUE GROUP STARTS FOOD DISTRIBUTION PRIOR TO BROADCAST

	Moonday Two	
	#	%
Yes	1	7.7
No	12	92.3

TABLE 19

BLUE GROUP STARTS DAILY REPORT PRIOR TO BROADCAST

	Moonday Two	
	#	%
Yes	2	15.4
No	11	84.6

TABLE 20

RED GROUP COUNTDOWN PRIOR TO BROADCAST

	Moonday Two	
	#	%
Yes	5	38.5
No	8	61.5

TABLE 21

ASK TEACHERS HELP-DIVISION INTO ORANGE GROUP

	Moonday Two	
	#	%
Yes	2	15.4
No	11	84.6

TABLE 22

HELP RE DIVISION INTO ORANGE GROUP GIVEN

	Moonday Two	
	#	%
Yes	2	15.4
No	11	84.6

TABLE 23

RED GROUP PREPARED AND ABLE TO RECEIVE CODE

	Moonday Three	
	#	%
Yes	12	92.3
No	1	7.7

On Moonday Four, 77% of classes were confused by instructions for the Space Navigation game (TABLE 24), but were eventually able to sort out the confusion, because 54% gave each member a chance to be navigator (TABLE 25), and 23% of Blue groups awarded food to the winners (TABLE 26). It is interesting to note that although some groups did not award food because they felt they could not "afford" it, others (80%) were unaware of a competitive aspect to the game.

TABLE 24

INSTRUCTIONS FOR SPACE NAVIGATION CONFUSED

	Moonday Four	
	#	%
Yes	10	76.9
No	3	23.1

TABLE 25

OPPORTUNITY FOR ALL TO BE NAVIGATOR

	Moonday Four	
	#	%
Yes	7	53.8
No	6	46.2

TABLE 26

BLUE GROUP AWARD EXTRA RATIONS TO WINNERS

	Moonday Four	
	#	%
Yes	3	23.1
No	10	76.9

Hospitalization was carried out according to instructions on Moonday Five by only 31% of classes (TABLE 27). Reaction to hospitalization was equally divided between hostile (pushing and shoving, guards needed to prevent escape), pleased (a positive reaction) and passive (accepting) (TABLE 28). One class did not hospitalize at all.

TABLE 27

HOSPITALIZATION ACCORDING TO INSTRUCTIONS

	Moonday Five	
	#	%
Yes	4	30.8
No	9	69.2

TABLE 28

REACTION TO HOSPITALIZATION

	Moonday Five	
	#	%
Hostile	4	30.8
Pleased	4	30.8
Passive	4	30.8
No Hospitalization	1	7.7

On Moonday Six, 67% of the classes changed jobs within their own group, and only 17% within crews (TABLE 29). Group identity appears strong here, and certainly doesn't seem to have suffered any ill effects from the modified playing of the Navigation game. Only 42% of the classes felt it necessary to train personnel in their new jobs (TABLE 30).

TABLE 29

CREWS CHANGED JOBS

	Moonday Six	
	#	%
Yes-within crew	2	16.7
Yes-within group	8	66.7
No	2	16.7

TABLE 30

SHOWN HOW TO PERFORM NEW JOBS

	Moonday Six	
	#	%
Yes	5	41.7
No	7	58.3

Debriefing

Prior to Debriefing Day 1, less than half the classes had removed the materials used to create the lunex 12 spacecraft (TABLE 31). Dr. Parnell's instructions required clarification by the teacher in 73% of classes, and detailed clarification in 45% of classes (TABLE 32). Each pupil interviewed two others in 82% of classes (TABLE 33). During the broadcast on Debriefing Day 1, 82% of the classes were well involved, and 91% well involved during follow-up activities (TABLES 34 and 35). There was no observed inhibition of interaction during the interviews with the teacher in 27.3% of classes, in contrast to no discussion in 9% (TABLE 36). The response to the teacher reading his list of words was good in 45% of classes, but in 36% the list was not read (TABLE 37). Discussion of similarities and differences took place in 55% of classes (TABLE 38). Time required for interviews on Debriefing Day 1 ranged from 10 to 17 minutes (TABLE 39). In 82% of the classes a time limit was set by the teacher for this activity. Total length of debriefing days range from a half-hour to an hour (TABLE 40).

TABLE 31

REMOVAL OF MATERIALS PRIOR TO DEBRIEFING DAY 1

	Debriefing Day One	
	#	%
Yes	5	41.7
No	7	58.3

TABLE 32

CLARIFICATION OF INSTRUCTIONS

	Debriefing Day One	
	#	%
No information		
Detailed	5	45.4
Some	3	27.3
None required	3	27.3

TABLE 33

EACH PUPIL INTERVIEW TWO OTHERS

	Debriefing Day One	
	#	%
Yes	9	81.8
No	2	18.2

TABLE 34

PUPILS' RESPONSE DURING BROADCAST

		Debriefing Day One	
		#	%
Very involved	1	6	54.5
	2	3	27.3
	3	2	18.2
	4		
Not involved	5		

TABLE 35

PUPILS RESPONSE DURING FOLLOW-UP

		Debriefing Day One #	%
Very involved	1	6	54.5
	2	4	36.4
	3		
	4	1	9.1
Not involved	5		

TABLE 36

RESPONSE AND INTERACTION DURING DISCUSSION OF INTERVIEWS

	Debriefing Day One #	%
Great deal	3	27.3
Some	4	36.4
Very little	3	27.3
No discussion	1	9.1

TABLE 37

RESPONSE TO TEACHER READING LIST

	Debriefing Day One #	%
List not read	4	36.4
Great deal	5	45.5
Some	1	9.1
Very little	1	9.1

TABLE 38

DISCUSSION OF SIMILARITIES AND DIFFERENCES

	Debriefing Day One #	%
Took Place	6	54.5
Did not take place	5	45.5

TABLE 39

TIME REQUIRED FOR INTERVIEWS

Minutes	Debriefing Day One \#	%
0 - 10	6	54.5
11 - 15	3	27.3
16+	2	18.2

TABLE 40

LENGTH OF DEBRIEFING

Minutes	Debriefing Day One \#	%
0 - 30	-	-
31 - 45	7	58.3
46 - 60	5	41.7

On Debriefing Day 2, 83% of teachers referred to Mission Control in their opening remarks (TABLE 41). An average of about 75% of teachers asked the pupils to recall the events of each Moonday using their log sheets (TABLE 42). About 50% of teachers asked all the questions pertinent to each Moonday, with a high point of 75% when discussing Moonday 1, and a low point of 42% when discussing Moonday 4 (TABLE 43). Because of the modifications in the Navigation game, not all the questions were applicable on this day. Seventy-five percent of teachers made notes on the board for use the following day (TABLE 44). Debriefing Day 2 was by far the longest of the 4 post-game sessions (TABLE 45). Four of the teachers held it on two consecutive days, and one used three days. On Debriefing Day 2, 75% of classes were well involved. This is in marked contrast to Debriefing Day 3, when only 40% were well involved, and 40% were poorly involved (TABLE 46).

TABLE 41

TEACHERS REFER TO MISSION CONTROL

	Debriefing Day Two	
	#	%
Yes	10	83.3
No	2	16.7

TABLE 42

TEACHERS ASK PUPILS TO RECALL EVENTS USING LOG SHEETS

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Yes	10	83.3	8	66.7	9	75.0	9	75.0	9	75.0	8	66.7	9	75.0
No	2	16.7	4	33.3	3	25.0	3	25.0	3	25.0	4	33.3	3	25.0

TABLE 43

TEACHERS ASK QUESTIONS PERTINENT TO EACH MOONDAY

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Yes	27	75.0	26	54.2	12	50.0	25	41.7	31	64.6	20	55.6	11	45.8
No	9	25.0	22	45.8	12	50.0	35	58.3	17	35.4	16	44.4	13	54.2

TABLE 44

TEACHERS MAKE NOTES ON BOARD FOR DEBRIEFING DAY THREE

	Debriefing Day Two	
	#	%
Yes	3	75.0
No	9	25.0

TABLE 45

LENGTH OF DEBRIEFING

Minutes	Debriefing Day Two #	%	Debriefing Day Three #	%	Reflection Day One #	%
0 - 20			3	30.0		
21 - 40	3	27.3	3	30.0	1	20.0
41 - 60	4	36.4	3	30.0	4	80.0
61 - 80	2	18.2	1	10.0		
81+	2	18.2				

TABLE 46

INVOLVEMENT OF PUPILS

	Debriefing Day Two #	%	Debriefing Day Three #	%	Reflection Day One #	%
Very involved 1	3	25.0	2	20.0	2	40.0
2	6	50.0	2	20.0	1	20.0
3	1	8.3	2	20.0	2	40.0
4	2	16.7	4	40.0		
Not involved 5						

On Debriefing Day 3, discussion of identification of needs, need for structures and roles, produced clear or partly clear identification or understanding in 60% of classes (TABLES 47, 48 and 49). Seventy percent of teachers encouraged discussion during this session (TABLE 50), but only 50% were able or even partly able to assist their classes in understanding the concepts involved (TABLE 51). The problem here appears to be the difficulty some teachers have in leading their pupils through the morass of detail culled from particular and individual experiences, to useful and meaningful generalization based on these experiences.

TABLE 47

IDENTIFICATION OF NEEDS

	Debriefing Day Three #	%
Clear identification	4	40.0
Partly clear	2	20.0
No identification	4	40.0

TABLE 48

UNDERSTANDING NEED FOR STRUCTURES

	Debriefing Day Three	
	#	%
Clearly understood	2	20.0
Some understanding	4	40.0
Little/no understanding	4	40.0

TABLE 49

UNDERSTANDING NEED FOR ROLES

	Debriefing Day Three	
	#	%
Clearly understood	3	30.0
Some understanding	3	30.0
Little/no understanding	4	40.0

TABLE 50

TEACHERS' ROLE - DISCUSSION

	Debriefing Day Three	
	#	%
Encouraged Discussion	7	70.0
Permitted some	2	20.0
Discouraged discussion	1	10.0

TABLE 51

TEACHERS' ROLE - GROUP LEADER

	Debriefing Day Three	
	#	%
Able to assist understanding	3	30.0
Partly able to assist understanding	2	20.0
Little/no ability to assist understanding	5	50.0

Of the original 13 classes, only 5 completed Reflection Day 1. One dropped out at Moonday 5, and the others during debriefing.

Reflection

On Reflection Day 1, identification of basic needs in society was successfully carried out in 80% of classes (TABLE 52), and research groups were formed in 40% and were to be formed in the near future by 20% (TABLE 53).

TABLE 52

IDENTIFICATION OF BASIC NEEDS - SOCIETY

	Reflection Day One	
	#	%
Yes	4	80.0
No	1	20.0

TABLE 53

RESEARCH GROUPS FORMED

	Reflection Day One	
	#	%
Yes	2	40.0
No	2	40.0
To be formed	1	20.0

Teacher Participation And Modifications

Teachers' participation in the game during the seven Moondays is tabulated in TABLE 54. An average of 31.5% of teachers remained withdrawn or passive during this time. It is interesting to note that none of the teachers who maintained this attitude consistently, even while remaining in the classroom, was able to carry on a meaningful debriefing. Active preparation immediately prior to broadcast was carried on by about 30% of teachers for the first four Moondays, but decreased rapidly during days 5, 6 and 7 (TABLE 55).

TABLE 54

TEACHER'S ROLE ON EACH DAY

Participation	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Totally withdrawn/ passive	3	23.1	3	23.1	5	38.5	1	7.7	4	30.8	6	50.0	6	50.0
Minimal	6	46.1	3	23.1	7	53.8	7	53.8	7	53.8	3	25.0	3	25.0
Intervenes during crisis	3	23.1	7	53.8	1	7.7	4	30.8	1	7.7	1	8.3		
Interferes	1	7.7					1	7.7	1	7.7	2	16.7	3	25.0

TABLE 55

PREINVOLVEMENT - IMMEDIATELY PRIOR TO BROADCAST

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Active preparation	4	30.8	5	38.5	3	23.1	4	30.8	3	23.1	2	16.7		
Minimal	8	61.5	3	23.1	3	23.1	3	23.1	5	38.5	1	8.3	2	16.7
None	1	7.7	5	38.5	7	53.8	6	46.1	5	38.5	9	75.0	10	83.3

There were no modifications of time for most of the classrooms, but a small percentage did allow longer or shorter periods for the game (TABLE 56). Classes rarely used materials on the wrong day, but this did happen in 23.1% of classes on Moonday 1 (TABLE 57). Specified tasks were not undertaken in about 34% of classes over the seven days, with a peak on Moonday 2, and a low point on Moonday 5 (TABLE 58). The navigation game was modified by about 77% of the classes, and Hospitalization by 46% (TABLE 59).

TABLE 56

MODIFICATION OF TIME ON EACH DAY

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No information														
Longer period	2	15.4	2	15.4	1	7.7	1	7.7						
Shorter period	1	7.7	2	15.4	1	7.7			1	7.7	1	8.3	3	25.0
No modification	10	76.9	9	69.2	11	84.6	12	92.3	12	92.3	11	91.7	9	75.0

TABLE 57

MODIFICATIONS OF MATERIALS ON EACH DAY

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	#	#	%	#	%
No information														
Used on wrong day	3	23.1	1	7.7					1	7.7				
Not used on wrong day	10	76.9	12	92.3	13	100.0	13	100.0	12	92.3	12	100	12	100

TABLE 58

TASKS NOT UNDERTAKEN ON EACH DAY

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No information	2	15.4							1	7.1				
Yes	5	38.5	6	46.1	4	30.8	4	30.8	2	15.4	4	33.3	5	41.7
No	6	46.1	7	53.8	9	69.2	9	69.2	10	76.9	8	66.7	7	58.3

TABLE 59

OTHER MODIFICATIONS

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
1. Eating food before read. Man.	1	7.7							7	53.8	1	8.3	1	8.3
2. Not divided into groups	2	15.4							1	7.7				
3. Not doing Health & morale with entire crew.			1	7.7	1	7.7			1	7.7	1	8.3	1	8.3
4. Navigation game modified							9	69.2	1	7.7				
5. Hosp. modified									6	46.1				
6. Elimination of members											1	8.3		

The groups divided themselves by sex in 38.5% of classrooms on Moonday 1 and contained both sexes in 38.5% on Moonday 2.There is the same percentage of classes with groups containing both sexes, but none in which each group was of one sex only. 66.7% of the classes on Moonday 2 were divided so that one or two of the three groups were of one sex, and the remaining groups mixed (TABLE 60).

Grouping

TABLE 60

DIVISION INTO GROUPS

	Moonday One		Moonday Two	
	#	%	#	%
By sex	5	38.5		
Mixed	5	38.5	5	38.5
By sex/mixed	3	23.1	8	66.7

Leaders emerged spontaneously in approximately 47% of classes over Moondays 1, 2 & 6. A small percentage elected their leaders, and approximately 25% had no leaders on Moondays 1 & 2 (TABLE 61). Leadership remained constant in 70% of classes (TABLE 62).

Leadership

TABLE 61

LEADERS EMERGENCE

	Moonday One				Moonday Two						Moonday Six					
	Red		Blue		Red		Blue		Orange		Red		Blue		Orange	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No information	2	15.4					1	7.7			5	41.7	4	33.3	5	41.7
Spontaneous	7	53.8	6	46.1	7	53.8	8	61.5	7	53.8	5	41.7	6	50.0	4	33.3
Elected	1	7.7	2	15.4					1	7.7	2	16.7	2	16.7	2	16.7
Spontaneous Later	1	7.7	2	15.4	1	7.7	1	7.7	1	7.7						
No leaders	2	15.4	3	23.1	5	38.5	3	23.1	4	30.8					1	8.3

TABLE 62

LEADERSHIP

	Moonday One				Moonday Two						Moonday Six					
	Red		Blue		Red		Blue		Orange		Red		Blue		Orange	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No information	3	23.1	1	7.7			1	7.7								
Remained constant	10	76.9	8	61.5	8	61.5	8	61.5	10	76.9	9	75.0	9	75.0	9	75.0
Changed			4	30.8	5	38.5	4	30.8	3	23.1	3	25.0	3	25.0	3	25.0

Interaction between groups was generally free after Moonday 1, with the exception of Moonday 4, when the classes worked in groups to do the Navigation game, and Moonday 6, when they tended to exchange jobs within groups rather than within crews (FIG.1). Intense conflicts over food during the seven Moondays were dramatic enough to take on more importance than they deserve. They in fact happened in relatively few instances, with a peak of 17% on day 6. Mild conflicts, however reach a peak of 50% of classes on day 7 (FIG.2).

Interaction

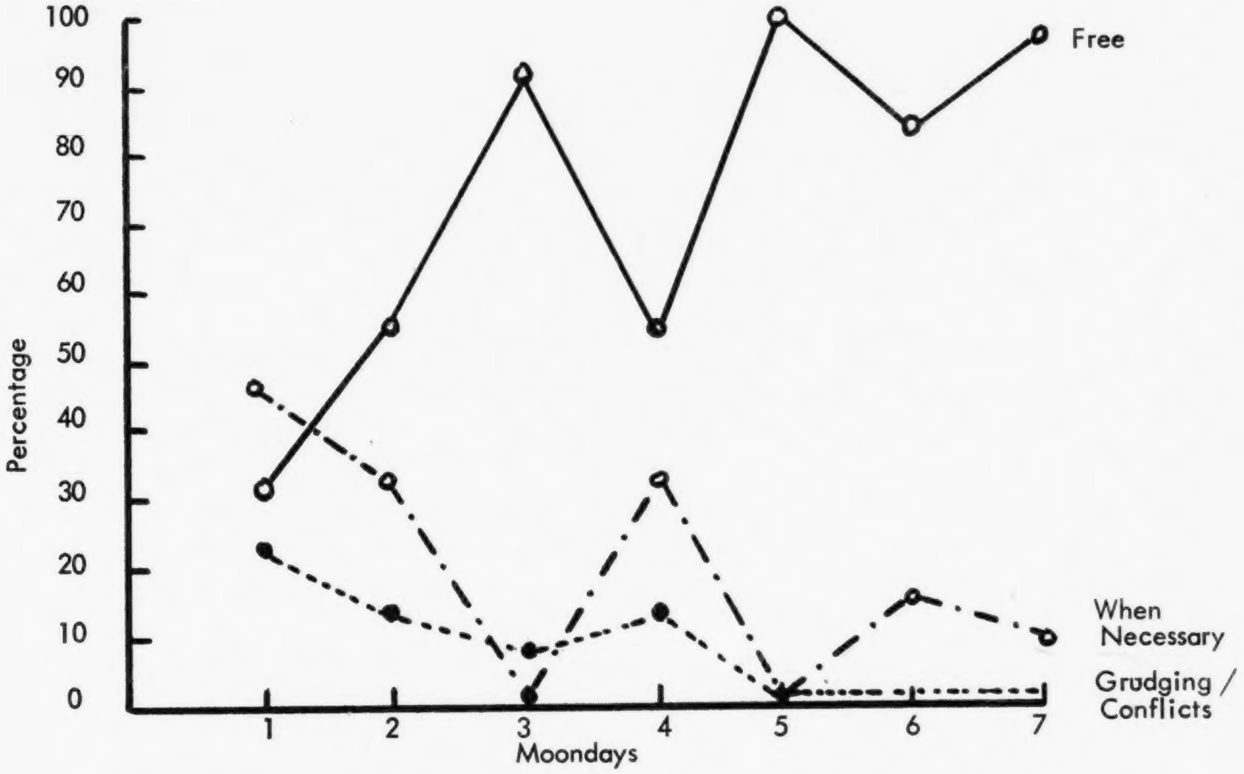

FIG. 1 - INTERACTION BETWEEN GROUPS - MOONDAYS 1 - 7

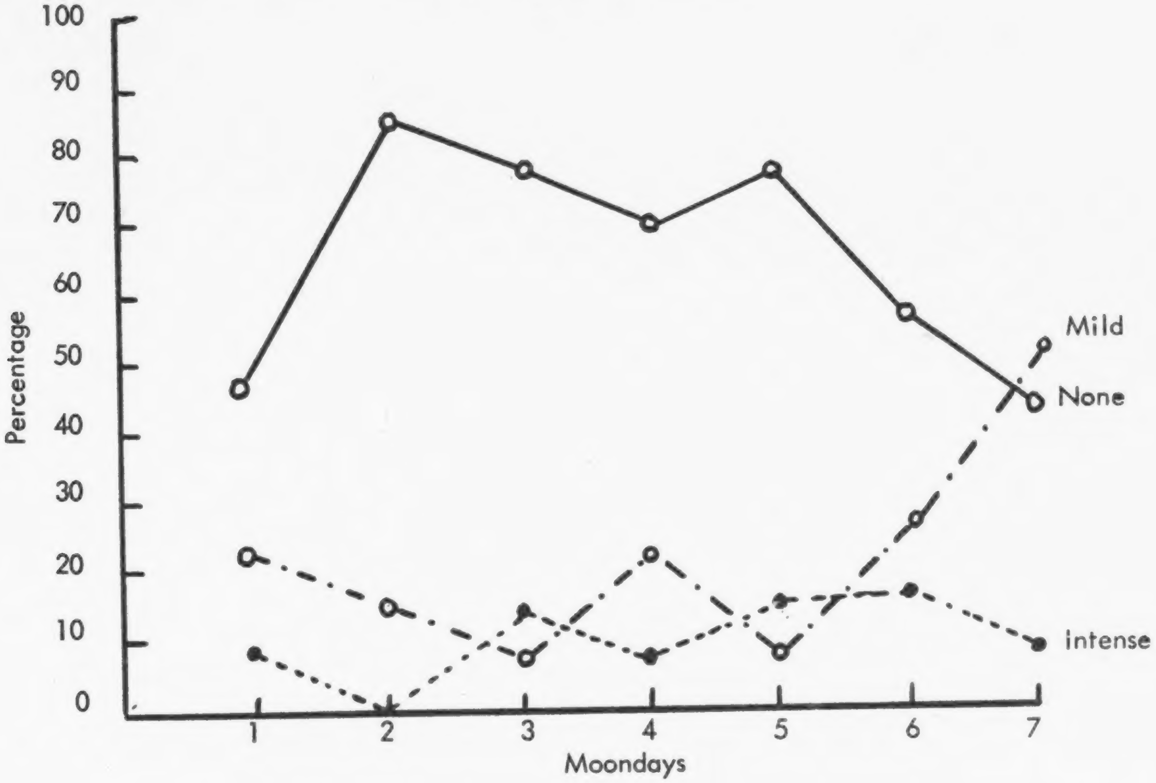

FIG. 2 - FOOD CONFLICTS BETWEEN GROUPS - MOONDAYS 1 - 7

Comparing The Three Groups

Analysis of a number of variables was done by looking at each of the three groups (Red, Blue and Orange) separately. It is felt however, that there is no significant difference between the groups when looked at over all seven Moondays. However when looking at each Moonday individually some interesting differences become apparent. On Moonday 5, for example, Red and Orange groups understood instructions fairly well in 53% and 69% of classes, respectively. Blue groups did not understand instructions fairly well in any of the classes, but understood them in part in 92% of classes (TABLE 63). The same situation holds true for following instructions on Moonday 5 (TABLE 64). There is very little difference in interest level between the three groups, except that from Moonday 3 on, Orange group seems to hold a slight edge over the other two groups (TABLE 65). There are no significant differences between the groups in involvement in tasks (TABLE 66), or in Role Playing (TABLE 67). On Moonday 2, all or most pupils participated in duties assigned to the group in 70% of the Red group, and 84% of the Orange group, but in only 38% of the Blue group. However on Moonday 6, 91% of Blue groups had all or most pupils participating, while Red and Orange group had 66% and 75% respectively (TABLE 68). There were no significant differences between groups either in conflicts or their resolution (TABLES 69 and 70).

TABLE 63

UNDERSTANDING INSTRUCTIONS

	One		Two		Three		Four		Five		Six		Seven	
Red Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Fairly well	5	38.5	7	53.8	7	53.8	4	30.8	7	53.8	5	41.7	5	41.7
In part	3	23.1	5	38.5	6	46.1	1	7.7	5	38.5	6	50.0	6	50.0
Not at all	4	30.8	1	7.7			6	46.1						
Understood but didn't want to	1	7.7					2	15.4	1	7.7	1	8.3	1	8.3

UNDERSTANDING INSTRUCTIONS

	One		Two		Three		Four		Five		Six		Seven	
Blue Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Fairly well	4	30.8	9	69.2	7	53.8	5	38.5			6	50.0	5	41.7
In part	7	53.8	3	23.1	6	46.1	3	23.1	12	92.3	5	41.7	6	50.0
Not at all	2	15.4	1	7.7			3	23.1	1	7.7				
Understood but didn't want to							2	15.4			1	8.3	1	8.3

UNDERSTANDING INSTRUCTIONS

	One		Two		Three		Four		Five		Six		Seven	
Orange Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Fairly well			8	61.5	8	61.5	6	46.1	9	69.2	6	50.0	5	41.7
In part			4	30.8	5	38.5	2	15.4			5	41.7	6	50.0
Not at all			1	7.7			3	23.1	3	23.1				
Understood but didn't want to							2	15.4	1	7.7	1	8.3	1	8.3

TABLE 64

FOLLOWING INSTRUCTIONS

Red group	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Fairly well	7	53.8	8	61.5	7	53.8	4	30.8	7	53.8	6	50.0	5	41.7
Not too well	3	23.1	4	30.8	6	46.1	3	23.1	5	38.5	5	41.7	4	33.3
Not at all	3	23.1	1	7.7			6	46.1	1	7.7	1	8.3	3	25.0

FOLLOWING INSTRUCTIONS

Blue Group	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Fairly well	7	53.8	9	69.2	7	53.8	5	38.5			7	58.3	7	58.3
Not too well	5	38.5	3	23.1	5	38.5	3	23.1	12	92.3	5	41.7	3	25.0
Not at all	1	7.7	1	7.7	1	7.7	5	38.5	1	7.7			2	16.7

FOLLOWING INSTRUCTIONS

Orange Group	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Fairly well			8	61.5	8	61.5	7	53.8	8	61.5	7	58.3	5	41.7
Not too well			4	30.8	5	38.5	2	15.4	4	30.8	5	41.7	5	41.7
Not at all			1	7.7			4	30.8	1	7.7			2	16.7

TABLE 65

INTEREST LEVEL

	One		Two		Three		Four		Five		Six		Seven	
Red Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Quite high	8	61.5	7	53.8	3	23.1	5	38.5	8	61.5	4	33.3	4	33.3
Sporadic	3	23.1	5	38.5	9	69.2	7	53.8	4	30.8	5	41.7	5	41.7
Uninterested	2	15.4	1	7.7			1	7.7	1	7.7	3	25.0	3	25.0

INTEREST LEVEL

	One		Two		Three		Four		Five		Six		Seven	
Blue Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Quite high	9	69.2	9	69.2	3	23.1	7	53.8	6	46.1	5	41.7	4	33.3
Sporadic	4	30.8	4	30.8	10	76.9	6	46.1	6	46.1	6	50.0	6	50.0
Uninterested									1	7.7	1	8.3	2	16.7

INTEREST LEVEL

	One		Two		Three		Four		Five		Six		Seven	
Orange Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Quite high			9	69.2	6	46.1	7	53.8	9	69.2	6	50.0	6	50.0
Sporadic			4	30.8	7	53.8	6	46.1	3	23.1	6	50.0	4	33.3
Uninterested									1	7.7			2	16.7

TABLE 66

INVOLVEMENT IN TASKS

Red Group	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total	3	23.1	5	38.5	3	23.1	2	15.4	7	53.8	2	16.7	3	25.0
Fairly/quite involved	3	23.1	3	23.1	8	61.5	2	15.4	4	30.8	6	50.0	2	16.7
Sometimes involved/sometimes not	4	30.8	4	30.8	2	15.4	6	46.1	1	7.7	2	16.7	3	25.0
Uninvolved	3	23.1	1	7.7			3	23.1	1	7.7	2	16.7	4	33.3

INVOLVEMENT IN TASKS

Blue Group	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total	3	23.1	5	38.5	2	15.4	2	15.4	5	38.5	2	16.7	3	25.0
Fairly/quite involved	3	23.1	4	30.8	8	61.5	4	30.8	6	46.1	8	66.7	5	41.7
Sometimes involved/sometimes not	6	46.1	3	23.1	3	23.1	7	53.8	1	7.7	2	16.7	2	16.7
Uninvolved	1	7.7	1	7.7					1	7.7			2	16.7

INVOLVEMENT IN TASKS

Orange Group	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Total			6	46.1	3	23.1	3	23.1	8	61.5	4	33.3	3	25.0
Fairly/quite involved			4	30.8	7	53.8	6	46.1	3	23.1	4	33.3	3	25.0
Sometimes involved/sometimes not			2	15.4	3	23.1	4	30.8	1	7.7	4	33.3	4	33.3
Uninvolved			1	7.7					1	7.7			2	16.7

TABLE 67

ROLE PLAYING

	One		Two		Three		Four		Five		Six		Seven	
Red Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%
No information	1	7.7			3	23.1			2	23.1				
Serious	4	30.8	3	23.1	2	15.4	4	30.8	4	30.8	4	33.3	3	25.0
Light hearted	2	15.4	1	7.7			2	15.4	4	30.8	1	8.3	2	16.7
Little or no	6	46.1	9	69.2	8	61.5	7	53.8	3	23.1	7	58.3	7	58.3
Blue Group														
No information					1	7.7								
Serious	5	38.5	2	15.4	3	23.1	5	38.5	6	46.1	5	41.7	4	33.3
Light-hearted	2	15.4	2	15.4	2	15.4	1	7.7	3	23.1	2	16.7	6	50.0
Little or no	6	46.1	9	69.2	7	53.8	7	53.8	4	30.8	5	41.7	2	16.7
Orange Group														
No information					2	15.4								
Serious			3	23.1	2	15.4	5	38.5	6	46.1	6	50.0	4	33.3
Light hearted			1	7.7	2	15.4	1	7.7	4	30.8	2	16.7	3	25.0
Little or no			9	69.2	7	53.8	7	53.8	3	23.1	4	33.3	5	41.7

TABLE 68

PARTICIPATION IN DUTIES ASSIGNED TO GROUPS

	One		Two		Three		Four		Five		Six		Seven	
	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Red Group														
No information							1	7.7	2	15.4				
All	2	15.4	4	30.8	4	30.8	5	38.5	3	23.1	4	33.3	5	41.7
Most	4	30.8	5	38.5	5	38.5	1	7.7	6	46.1	4	33.3	1	8.3
Some/few	6	46.1	3	23.1	4	30.8	5	38.5	2	15.4	3	25.0	4	33.3
None	1	7.7	1	7.7			1	7.7			1	8.3	2	16.7
Blue Group														
No information					1	7.7	1	7.7						
All	2	15.4	1	7.7	1	7.7	5	38.5	3	23.1	5	41.7	5	41.7
Most	5	38.5	4	30.8	7	53.8	1	7.7	6	46.1	6	50.0	4	33.3
Some/few	5	38.5	4	30.8	4	30.8	6	46.1	4	30.8	1	8.3	3	25.0
None	1	7.7	4	30.8										
Orange Group														
No information					3	23.1	2	15.4	1	7.7				
All			6	46.1	5	38.5	5	38.5	5	38.5	3	25.0	5	41.7
Most			5	38.5	2	15.4	3	23.1	6	46.1	6	50.0	3	25.0
Some/few			2	15.4	3	23.1	3	23.1	1	7.7	3	25.0	3	25.0
None													1	8.3

TABLE 69

CONFLICTS WITHIN GROUPS

	One		Two		Three		Four		Five		Six		Seven	
Red Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%
Many	2	15.4	2	15.4	1	7.7	2	15.4					1	8.3
Some/few	3	23.1	1	7.7	3	23.1	2	15.4	3	23.1	4	33.3		
None	8	61.5	10	76.9	9	69.2	9	69.2	10	76.9	8	66.7	11	91.7
Blue Group														
Many	2	15.4	2	15.4	1	7.7	3	23.1			1	8.3	1	8.3
Some/few	5	38.5	3	23.1	2	15.4	3	23.1	3	23.1	3	25.0	1	8.3
None	6	46.1	8	61.5	10	76.9	7	53.8	10	76.9	8	66.7	10	83.3
Orange Group														
Many			2	15.4	1	7.7	3	23.1			1	8.3	1	8.3
Some/few			2	15.4	1	7.7	3	23.1	3	23.1	3	25.0	2	16.7
None			9	69.2	11	84.6	7	53.8	10	76.9	8	66.7	9	75.0

TABLE 70

RESOLUTION OF CONFLICTS

	One		Two		Three		Four		Five		Six		Seven	
Red Group	#	%	#	%	#	%	#	%	#	%	#	%	#	%
N/A (no conflicts)	9	69.2	11	84.6	9	69.2	8	61.5	11	84.6	8	66.7	11	91.7
Most times	1	7.7	1	7.7	3	23.1					2	16.7		
Sometimes	3	23.1	1	7.7	1	7.7	1	7.7	1	7.7			1	8.3
No resolution							4	30.8	1	7.7	2	16.7		
Blue Group														
N/A (no conflicts)	7	53.8	8	61.5	9	69.2	8	61.5	10	76.9	9	75.0	10	83.3
Most times	2	15.4	3	23.1	1	7.7	1	7.7	1	7.7	2	16.7	1	8.3
Sometimes	2	15.4	1	7.7	1	7.7	2	15.4	2	15.4				
No resolution	2	15.4			2	15.4	2	15.4			1	8.3	1	8.3
Orange Group														
N/A (no conflicts)			9	69.2	11	84.6	6	46.1	10	76.9	9	75.0	9	75.0
Most times			1	7.7	1	7.7	1	7.7	1	7.7	2	16.7	2	16.7
Some times			2	15.4	1	7.7	2	15.4	2	15.4				
No resolution			1	7.7			4	30.8			1	8.3	1	8.3

Summary

The combined descriptions and ratings from the observers' daily reports provide a reasonable insight into what happened in the schools during Operation Moonvigil.

The pupils, for the most part, tended to view and listent to a clear television broadcast, although in two classes reception was poor. The children were definitely involved prior to and during each broadcast for the first five Moondays, and appeared to enjoy these activities.

However, Moonday 6 and 7 left something to be desired as the level of involvement and enjoyment dropped noticeably. The same comment may be made for the half hour of follow-up activities each day.

Approximately three-quarters of the classes experienced some difficulty in following instructions in their E.P. Kits on the first two Moondays. In fact, 20% of the classes were not able to follow instructions at all on those days. This is evidenced in part by the fact that only one or two Blue groups started food distribution or their daily reports prior to broadcast. Red group fared better in that in five of the 13 classes, they conducted a countdown and in 12 classes were prepared and able to receive a code. In 10 classes, the children were confused by the instructions for the Space Navigation Game but tended to sort out the confusion or blunder through. In a similar vein, hospitalization was carried out according to instructions in only four classrooms, but 12 of the 13 classes did go through some kind of hospitalization procedure. On Moonday 6, two-thirds of the classes changed jobs only within their own groups, indicative, in my opinion, that strong group identity was definitely emerging.

Turning to debriefing and reflection, again the pupils tended to be well-involved, although instructions required clarification by the teachers in three-quarters of the classes. It is worth noting that Debriefing Day 2 was by far the longest of the four post-game sessions, four of the teachers holding it on two consecutive days and one teacher for three days. On Debriefing Day 3, interest waned, although in 60% of the classes discussion of needs, roles and structures produced clear or partly clear understanding. By Reflection Day 1, only five of the 13 classes remained, one dropping out on Moonday 5 and the rest during debriefing.

It is worth stressing that there was a wide degree of teacher participation. Some teachers remained totally withdrawn or passive most of the time, while others went to the opposite extreme in making major modifications in their role as it is outlined in the Teacher's Guide. In some classes, the teacher failed to turn on the television sets and was absent from the room for parts of the game, while in other classrooms, teachers initiated interaction and imposed conduct rules. The individual case studies provide greater detail regarding this particular facet of the game.

THE THIRTEEN CLASSROOMS

In this chapter, the information is presented in a qualitative manner. Each section represents one of the observed schools. The observer summarized his daily description of the classroom events and to the observations we have juxtaposed the summary of the pupils' diaries and, in the four available cases the teacher questionnaire summary.

A minimum of editing was imposed on the observers' reports and the summary of the pupils' diaries are rich with verbatim comments. In spite of this approach, the author is of the opinion that the enormous wealth of data gathered by the observers can only be partially represented by the information provided on the following pages. It is for this reason that OECA staff were welcome to attend the daily debriefing sessions held with the observers on an individual basis.

APPLE ELEMENTARY SCHOOL

Observer

The class I was watching was prepared for a moon project, though they did not know the specifics. The room (a traditional classroom) was well decorated with pictures, panels, labels, etc. and was arranged as suggested in the teacher's guide. While I was there on the Friday before Moonvigil started, the children were told about the 40 minutes of each moon day. On Monday, and each Moon Day after, several pupils came in early to set up the desks. At recess they were returned to their usual formation. The main pieces of furniture used during the game were the pupil's desks (in rows along the sides and centre), the teacher's desk, and stools. Most of the time the students were standing, except when a few were writing. They wandered freely with-in their "space", with relatively little crossing over or communication with the other crew.

There were various high and low points in the game. The highs were obvious, since they attracted the attention of the whole crew. The food excited them the first day. The girls thought it was just for them, the boys grumbled, and then the matter was straightened out (with the teacher's help). The second day the health and morale interviews drew everyone to the front of the room, around the teacher's desk, as the interviewers stood behind it, questioning and directing. They had some difficulty finishing on time. By the third day the food and the interview procedures were established and they finished in a much shorter time. The job descriptions were done by one or two people with little discussion. One boy just asked what others did. The latter part of this day was a low point in the game. There was a lot of wandering about, talking etc. (still mostly within their space) and one boy went to his desk to work on something else. On Moon day 4, regular duties were carried out. The space navigation exercise did not captivate the group, as the food and interviews had done. They did not understand the competitive aspect of it and so played it incorrectly. However, it did attract the attention of a number of individuals who had previously played no active part. They tried to figure out the game while the others did the regular jobs. Towards the end of the day, one boy made the whole crew try it together. Then Blue and Red groups played it once or twice on their own, before the day ended. Thus there was no lull as there had been the previous day. On Day 5 the hospital was the highlight. It took a while before several boys figured out that there was to be one, but once they got going, and put several crew members under the panel, the rest were interested; though several stayed at their jobs in spite of the commotion with the hospital. The coded messages also drew more interest, since they contained the clues about the contaminated food. Several worked on them and then tried to convey what they had learned to the others. On Day 6 there was a discussion about job changes and they moved into new groups. Those who had new jobs were wrapped up in them. The girls, former blues,did not take newjobs (though they put on buttons) so they wandered about, amusing themselves with the exercises. The exercises and the new job, for those who had them, were the highlights of this moon day. The last few minutes of the day were a low point, when all work was done and packets were away. On Moon Day 7, the food was once more of interest, promoting discussion and several minor arguments. They were all interested in getting their share of the food (or giving it to a friend). I think this was partly because it was the last day and partly because the unpopular boy of the crew had control of the food. The exercises attracted attention this day, but I think it was more because there was nothing else to do. The girls had no active roles, so they spent a large part of the period exercising or fooling around. The day was actually a low point in the game. Only a few were actively involved and even they finished about 5 minutes before the end of Moon Day. About three people were sitting alone in desks, looking for part of the time bored. There were more violations of moon space by both crews.

The general level of attentiveness during the broadcast, and the time following, varied considerably between individuals and during the game. On the whole though they were reasonably attentive, catching the main points of the game. However, they did miss some instructions (ex. the navigation game, dividing into two groups) and they took a while figuring others out (ex. the hospital). Some, in particular several of the boys, remained attentive throughout.

Once the game got going the girls seemed to think that they knew what to do (distribute the food) and it was up to the other groups to figure out the rest. They were ready to distribute the food on Day 5 without waiting for their message to be decoded. It was several boys who stopped them and tried to explain. After the first few days there was no more clustering about in a group to check instructions. Rather, individuals glanced at them occasionally. As a group, they seemed eager to jump into activities without reading, listening or discussing carefully. It was due to a few who stuck with the instructions, or code, that errors and missed points were brought out.

On the whole, I think the children were quite involved in the game. There were low points, when activities were finished, but these did not carry over to the next day. Due to the job changes and to extra activities such as the hospital, navigation game and job lists, everyone had a chance to be active at some point. And those who were not busy generally watched someone else do their job. Even when they were fooling around, it was game related (ex. the hospital, doing extra exercises) or was within their own space. The few comments about their moon situation tended to be joking (ex. "they're Martians I'll die if I have to survive on this") but they did take their jobs seriously. Even though they didn't do things "to the letter" (the daily logs were not very complete) they tried to follow instructions (ex. "We have to do this. They're doing it. We'd better"). In the debriefing time, they considered that the groups were necessary and had done what was required. They were willing to answer questions, though they were sometimes confused about what was wanted. Using the countdown period as a measure of involvement, they were keyed up the first few days, this waned slightly, and then picked up again slightly in the second week. Aside from the lulls, the involvement remained quite steady throughout the game.When someone left one job (ex. left interviews to work in the hospital) another person took over. The girls, after they left Blue group, did not become actively involved again (except to do the exercises). At one point one girl was helping with the timing in Orange group. But this was unlikely because the good jobs had been taken by the time the girls finally decided they had to leave Blue group.

I think they quite enjoyed Moonvigil, the free atmosphere and the jobs they were to do. I heard no complaints about the game. They were kept busy with school work right up to Moonvigil time. Afterwards, they settled quickly and started a Math lesson. They were sufficiently involved in their activities such that they paid little attention to myself or the teacher (he intervened several times without their request for assistance). There was a lot of talking and laughing and only one conflict situation which seemed to produce hard feelings for a while (but even that one seemed to be resolved). They enjoyed the interviews, the food, the hospital, etc. Red group felt important doing the decoding. By the last few days, the food did not have the same appeal (a few more were willing to give theirs away) but it did spark discussion and a number were eager to have extras. During the debriefing they were quite willing to answer the questions they knew the answers to, though a few, particularly the ones who had been most active, answered the majority of the questions. Even the unpopular boy who had been "jumped" on at various times, was eager to discuss and seemed to enjoy the experience.

There were several significant incidents during the game; acts of leadership, some conflict, assistance by the teacher, active involvement of previous wanderers. There was not strong leadership in the sense of telling all the others what to do. Rather, it was tied to a particular job (ex. "come and get your food", "your turn to be interviewed", "you have to go into the hospital"). There was only one clear cut example of effective leading of the whole crew. One boy decided everyone had to do the navigation game. He got their attention, handed out cards, and gave instructions. He had another boy navigate. They tried it once and then split up again. One conflict situation on Day 4 left one little girl unhappy for a while. The rest of the girls in Blue group felt she should do some work (she usually watched quietly). She did not want to since she did not know what to do; and she looked quite upset when three of the girls were at her at once. However, she finally sat down and did some writing (one of the other girls explained how) and the next day she wrote down the names while the food was handed out (she was away, though, for the rest of the game). The unpopular boy was avoided in changing jobs (only one boy would join him in Blue group), but he worked away undaunted. It was significant that all of the boys did get a chance to do important jobs, and while the girls were in Blue group they took turns doing the jobs . One boy who seemed prone to wandering the first few days, later worked on decoding and then on the interviews in Orange group. Actually he was helping some with the interviews a day or two before he changed into orange group.

Overall, they seemed quite willing to work at any job that was of interest (slighting over the less interesting jobs like writing up log reports). They asked for some assistance from the teacher (and he tried to set them straight several times), but they worked things out. There wasn't always enough jobs or work, but they did not seem concerned, or try to create new ones. There was some boredom, but it would disappear whenever a new situation arose. In the debriefing they tended to be specific rather than generalizing, perhaps because their methods for making decisions, carrying out activities etc. were not elaborate; also, they had some trouble understanding what the questions meant.

Most of this summary refers to one crew, but there were no drastic differences between the two crews in the room, so the general comments apply to both.

The diary writers in this class started Moonday 1 in a mood of high anticipation. "I think the idea of the game is very good and congratulate the person who thought of it". "I thought that the game was a lot of fun because of the kits which contained foodsticks, buttons, etc... also the set up of blast-off from T.V." "I think this game is wonderful. When are we going to land? I hope not so fast because it's fun to play this game". Three of the writers didn't care for the food. Pupils

"The space food sticks are quite stale". "I don't like the food especially. I would not like to survive on it". "Suggestion: different type of food sticks ", but the rest amply made up for their lack of enthusiasm. "How about some more chocolate sticks?" One girl was unhappy about the division into crews "Because it separates friends - I'm being left out rather because my three friends are on the other side and we do not exist for them, in the game". Another child was somewhat disturbed by the confusion "there was too much confusion in the class and it wasn't organized well enough". On Moonday 2 the air of enthisiasm is unabated. "We had fun decoding the message". "I think it's really cool the way that we have to do those health type games". "...it seems to be getting better all the time" (from the child who complained about the confusion). "The program was a lot better today". "Loopy was a very funny computer. I like it when he said jokes". By Moonday 3 the class seems to be settling into a comfortable routine. "Today we were much better organized. We finished with a lot of time to spare". "I think that today was the most organized day we have had so far". One writer was very annoyed to be shaken out of his routine on Moonday 4. "I think that this space navigation game is very riddikulous. I think we were doing very well the way it was going". Although most of the group appeared to remain calm about hospitalization, one writer said "It was WHACKY!! You walked by and someone tried to grab you and contaminate you. I myself was contaminated by one of the boys". Another said, "It was a mixed up crazy day because everybody was making noise". Although there has been very little discussion about food units to this point, except for liking or disliking them, on Moonday 6 these comments appear, "... exercise but we didn't do it because it says to increase food units and we didn't leave enough food units to do it". And "Blue group was afraid that without square food units there would not be enough for the days left on the moon. But it all came to the best". One mention is made of changing jobs, "We traded colour I went from Blue to Orange...I didn't know what to do but I did what I could and helped with this and that". On Moonday 7, only two of the writers expressed pleasure at being rescued, and one was "sad because the game is almost over". Most of the comment on this day was about finishing food sticks. One boy in Blue group ate an enormous quantity. Estimates vary from 16 to 25, and he gave only one food stick to each other crew member.

The boy who was sad about the end of the game seemed to be very remote from its realities. He mentions on day 1 that it is fun decoding and on day 2 that he is in the "log section". After that there is no more mention of activities or his part in them at all. He loved the "chocolate sticks" and every day wanted more than he was given. The rest of the days are filled with speculation about "the objects that are near us" (day 1). "Where is the Sky lab crew? I think that they are taken in by those objects... why don't you give us a hint" (day 2). "I can't help wondering if the objects took over Loopy..." (day 4). "I hope you'll tell us what the objects are that are heading this way" (day 6). This child had great difficulty "coming back to earth". "On the first debriefing day it was no good at all. No sticks to eat... in other words it was rotton".

Debriefing days are descibred by most of the diary writers, but with no indication that any of them were able to arrive at any generalizations about Moonvigil or to conceptualize their experiences.

This is a grade 6 class in the city of Toronto. Operation Moonvigil was held in a regular classroom which the teacher felt was fairly suitable. The classroom was divided by a row of desks, with work areas on either side for the two crews. There was one television set at the front of the room, and the E.P. Kits were set out on either side of it.

The teacher first heard of Moonvigil from another teacher. He had participated as a player in a simulation game previously, but had never conducted a game in the classroom. He considers himself a moderately progressive teacher and uses television as a teaching tool three to four times a month. He attended an OECA workshop and felt that it gave him fair confidence in using Moonvigil and fairly high competence. He felt that the workshop was helpful in that it supplied needed experience in the operation of the programme, but would have liked to have more actual experience.

Pre-involvement activities lasted four to eight hours and included class discussion, research projects, gathering materials (in these the class was not too well involved) and making materials (in which the class was well involved). After the game was played he felt that some emphasis on listening skills and work in following instructions precisely would have been helpful.

The teachers' guide was fairly helpful in providing a degree of confidence and competence for using Moonvigil. He felt that his materials provided were good, but that the manuals, although not needing clarification, could be improved by emphasis on certain words.

He states that about half the class carried out their duties and that interest waned during the week of broadcasts. High and average academic achievers and highly motivated students were well involved, those of average motivation not quite as involved, and low achievers and those with low motivation were not too involved.

In terms of the objectives set in the teachers' guide, he felt that Moondays 1 and 2 were quite successful. Day three was fairly successful, but groups were not carrying out their daily instructions and interest seemed down. Day 4 was considered rather unsuccessful because the instructions for the Space Navigation Game were not understood. On day 5 restlessness and foolishness were highly evident. Debriefing day he considered only partly successful because although the pupils were interested in each others responses, they displayed little insight into answers, "A rather flat day - all seemed to have little significance".

The class asked him several questions on each moon day, and he assisted them once or twice on each day. The pupils assumed roles of crews stranded on the moon sometimes.

He found his role as an observer quite difficult because "The mistakes made by the pupils were difficult to accept."

His personal expectations for his pupils during Moonvigil were to see his class become a solid unit, to promote interaction between them and give each person more insight into his friends and himself. He feels that these expectations were partially fulfilled. Those who were capable of analyzing what they saw received the greatest benefit from the game. He answers the question about using the game with another class, with a qualified yes. However, he would recommend using it to other teachers "Provided that they understand and recognize its limitations it does offer as a simulation game opportunities to bring the class together which are difficult to achieve in any other way".

He would use other television programs which provided a complement to classroom activities, and is particularly interested in those more directly involved with the subjects taken and assigned to specific grade levels, such as Social Studies or Science.

BEECH ELEMENTARY SCHOOL

Observer

Upon my arrival at the school, I was informed that a last minute change had been made in the arrangements for viewing the program. The principal had decided that a combined grade 5 and 6 class might profit more from the simulation game than the originally chosen grade 4 and 5. The teacher felt somewhat nervous and apprehensive about introducing her class to this novel situation. Although she admitted to feeling somewhat unprepared herself, she had attended the workshop and was interested in the game itself, and in trying it out with her class.

There was no active preparation for, nor anticipation of the game prior to my arrival in the classroom. It seemed that Friday was actually the first time the teacher informed her pupils of Moonvigil and their future participation in it. There was no sign of any kind of props, or atmosphere - creating setting.During my first visit, I was informed that my teacher was planning to introduce the kit to her class and familiarize them briefly with its contents, as well as the general contents of the instructions. It was her opinion that her class would be completely lost and unable to follow televised instructions unless she familiarized them with the expectations for the next few days of simulation. Since she planned to do this in the afternoon, I was unable to remain for it, but I was assured that it would be very general and would not refer to detailed instructions.

On the first day of Moonvigil, all attention was focussed on a pup which one of the kids had brought to school, it was a disruptive influence throughout the period. The children were very inattentive and rowdy from the beginning until the end of the game. They had problems understanding instructions, and difficulties following even the ones they did understand. They were reluctant to hand the responsibility for food distribution over to the Blue group,and insisted that the instructions were unfair. Food became the focal point of their activities and food centered duties seemed to be the highlight of every consecutive day. In retrospect, the first day of Moonvigil and the pupils' response to it was rather characteristic of the following seven days. There was much noise, chaos, disorganization, complaining, arguing, lack of interest, boredom, and confusion. The class repeatedly attempted to involve the teacher and elicit her help, but she attempted to disengage herself totally from the activities of the class. This was characteristic of her behaviour and lack of participation for the first five days of Moonvigil. The two leaders of the crew emerged on the first day, Brigitte and Tina, and they remained in control of activities for the total extent of the seven days of Moonvigil.

On the second day, the students were able to divide into three groups, but only following much noise and confusion. Many wanted to be in the Blue group so they could control rationing of food, others wanted to change to any other group as they were bored from lack of duties in their own. Subsequent to much shuffling and reshuffling, the three groups were formed, and the Orange group began to assume their responsibilities for health and morale. The two leaders from Blue and Red group both joined Orange group. A new leader emerged from each of the other groups, although Brigitte and Tina continued as the strong people of the whole crew, and while Tina did much running about and ordering, Brigitte was always sought out for help and advice. Although there were still many problems surrounding understanding of instructions, filling out of log reports and decoding messages, the pupils realized it was futile to elicit help from the teacher, consequently fewer questions were asked with every subsequent day. Pupils' comments, chaotic activities extraneous to the game itself, high level of noise, and termination of the game prior to the time limit indicated boredom and inability to understand and follow through instructions. The two activities which were engaged in every day of Moonvigil, and carried through with efficiency were food distribution and health and morale inspection. The pupils seemed to enjoy these and the physical activities connected with them. Other activities were frequently totally ignored or undertaken only to be deserted usually because of boredom or lack of understanding. Thus many crew members either sat around with nothing to do or engaged in acting out behaviour such as yelling, chasing, door slamming, hitting and arguing and acrobatics. As children frequently didn't hear nor pay attention to Loopie's instructions, on the third day, a job list was not composed, and no definite allocation of duties and responsibilities was made.

By the third day, Tina (Blue) and Chrissy had definitely taken over leadership of Blue group and had taken charge of food distribution and record-keeping. The other members of the group had little or nothing to do between food-centred and health-centred activities. On the fourth day, four members of Orange group, Charlene, Tina, Sonya and Patsy were correctly following instructions in playing the navigation exercise which Sonya initiated. Red group engaged in the exercise but did so incorrectly without seeming to realize that they were doing so. Blue group members came to Sonya who explained the rules of the game to them. As Sonya seemed to be the only one who really understood the instructions, all others came to her for assistance, and she seemed to gain status as assistant leader as a result. On the fourth day, the teacher felt it necessary to intervene at one point when the television set was in danger of being turned over, and to instruct the pupils to clean up the mess on termination of game activities.

On the fifth day, the teacher gave some introductory instructions, concerning the necessity to listen to the whole broadcast, and the use of the decoding equipment. The television was not in operating order, and the program was not seen, although the last two coded messages were heard. The teacher assumed Loopie's role and read out the first message to the class. It seemed that the messages were not decoded as instructions were not followed. Everyone wanted to be sick as the crew decided that patients would receive two space sticks to revive their strength. The carpet, sick-bay area, was filled with casualties. The crew was unaware of the message indicating possible contamination of the space sticks, until the teacher finally read the message; by then it was too late to do anything about it. Sonya was the nurse and cared for all the patients; she assumed leader's role today and was the only one who did not want to get sick, but attempted to make the epidemic a realistic situation by creating hospital boundaries, and turning visitors away from the isolated area.

There was some arguing on the sixth day and reluctance to change groups and roles. Tina - Orange and Jerry - Red argued over Tina's intent to replace Jerry as Red leader. Brigitte took over Chrissy's role as Blue leader, and Chrissy withdrew from game activities. Similarly Jerry and Tommy (Red) retired to the back of the room to fill out their diary. Patsy, Brigitte, Tina, Robin, Chrissy and Robby became the new Blue group. Charlene attempted to take over as Orange leader, but was unsuccessful and Tina returned from Red group to resume her leadership activities in Orange group. Many pupils were totally uninvolved during the whole period, and the noise and chaos were worse than ever before. The teacher felt it necessary to interrupt several times during day 6, as she felt the noise and confusion were "getting out of hand". At the termination of the game she advised her class that rather than acting so stupid and engaging in ridiculous activities, they should crawl into a corner and pretend that they died of over-exposure if they were not interested in assuming their roles as crew members. She also complained concerning the chaos and difficulty of controlling the class for the remainder of the day following Moonvigil activities. She informed me that she would cut down the debriefing period and do it without the assistance of the televised broadcast and the teacher's guide.

The only part of the broadcast the pupils paid attention to on the 7th day were the instructions concerning the possibility of celebrating rescue by eating the remaining space sticks. They immediately proceeded to do so. There was much arguing over Tina's distribution of the food; many accused her and each other of being favoured. Brigitte and Sonya alone attempted to follow through with planned procedures, the others engaged in yelling, fighting, arguing, door slamming, garbage throwing, etc. The teacher terminated the 7th day 20 minutes early by telling her pupils that she had had enough and ordering them to put away their equipment.

On the 7th day, I was approached by the principal who informed me of the teacher's reluctance to go on with Moonvigil. The teacher was very upset about the chaos and confusion in her room. She felt that it would be futile to go on with it, and she was unable to go on with teaching subsequent to the Moonvigil period every morning as she could not calm down the class.

The teacher decided to combine the three days of debriefing activities into one, and eliminate the reflection phase of the game. Her debriefing procedure was to ask the class questions concerning their behaviour during the past seven days as well as to elicit their opinions and feelings about Moonvigil. The pupils' responses were surprising both to myself and the teacher. Most of the students admitted that they enjoyed Moonvigil and wanted it to go on for more days. About 50% of the class said that they would prefer playing Moonvigil to watching a good movie. They admitted that much of the time was wasted as there were not enough jobs to keep everyone occupied. They felt that more games to keep everyone involved for a longer period of time, additional food sticks, and drinks to go with the food would improve the design of Moonvigil. All the pupils felt that the directions were confusing and had they been better clarified it would have been easier to get involved and follow game activities rather than getting bored and acting-out. Six of the pupils felt that they had been very active during all the game periods; 16 felt that they had something to keep them occupied for a majority of the time; 10 felt unfulfilled and left out. The class split in half when they were asked if more interference and guidance from the teacher would have made the game more enjoyable.

I asked the teacher if she planned to do any follow-up activities with her class. She said that she wasn't planning to do anything in the near future. She mentioned that she might incorporate some of the occurrences during Moonvigil in a social study activity she was planning for after Christmas. I voiced our interest in receiving any kind of feedback she would be inclined to send us, and she agreed to sent it in with her report. (Editor's note: The Teacher Questionnaire was not received from this school).

Pupils

Among the diary writers there was only one unqualified expression of enjoyment on Moonday 1. "I like the game of Moonvigil, it has been very good and it is a game that will help at school". The others made comments such as "I enjoy playing the game but I think it should be for a longer time...it's hard for some of the groups to get finished". "When we first started it I found it fun, but then when the TV went off (after broadcast) everything went wrong". It wasn't so much fun when my group was going away every few minutes. I don't like to do this project at all if I don't know what to do". On day 2 the girl who made the above remark said "today I have fun I change to Orange group because Red group is hard". The general concensus among writers was that day 2 was a better day. Most of the difficulty seemed to centre around the fact that the children felt that they didn't have enough time. "I think that it should last more longer, I think that if we keep on playing, we might be able to do it right". "I don't have the time to do the other exercises". There was a general lack of involvement and attentiveness, and though some writers report that "the code was hard and we were getting mixed up", "We did codes and it was hard but we finished", another writer says "Today the Orange group set up an isolation hospital. It gave a code but we didn't bother with that".

There was considerable conflict and confusion over the distribution of food sticks. "Blue group is in charge of the food and that caused a lot of trouble". "The other groups came over to the other side and when we were giving out the foodsticks the red group came over and everything was going wrong". "We shouldn't eat all the food sticks today". I wasn't spose to give two space food sticks to the people, so now we are short of space food sticks (after the navigation game). There were many noisy conflicts during the game, "there was a lot of confusion and Laurie kept bossing us around. That got Tina mad and she kept on shouting". Laurie was a diary writer, and her account of her trials and tributions is interesting. On day 1 "...it wasn't easy to keep my group together...I have to shout to bring themtogether (same conflict as above). After changing to Orange group on day 2 she says " My groupwas quite all right today. They were doing what I ask them to do and some done well in their exercises. They were fooling around but I got them together". On day 3, "One kid named Marc said that he is sick. I didn't believe him of course because if he is sick, he shouldn't be at school. Well, I mark down that he is well because he didn't want me to put down very well or he is going to give me a wack of his fist but I'm not scared of him. I don't like his punches but I'm not scared of him". On day 4, "We had a game with the Blue group and I believe that they cheated because they have one person too many... they think they won the game but they didn't. We won the game, because one person in our group didn't have a turn...I mean it, they are born cheaters and don't want to loose...I think they are nuts. I'm sorry for my language but it really burns me up to think of it...After we finished shouting at each other I went back to my seat".

Two of the writers suggested that what the game needed was more jobs. "Everybody should have a turn to do something in this game. Then there would be less running around and less talking to Group B".

Several writers commented on the fact that the teacher got mad at them on day 6 and made them put their things away.

The teacher held a token debriefing on day 1 (the broadcast was not watched), but this is not recorded in any of the diaries.

CEDAR ELEMENTARY SCHOOL

On the Friday just previous to the beginning of Moonvigil, I visited the class that was going to be involved in the game. I met the teacher, who introduced me to his students and explained to them as best he could what my function was to be in their classroom, that of an observer. The teacher announced to his students that they would be playing a game, starting Monday, called Moonvigil. He informed me at the end of his class time that day that it was the first time he had informed his class about the game. He also asked me upon leaving whether I was from the Board of Education or not and when I quickly responded "No" he said he was sorry and that I could not blame him for being a little bit nervous about having a stranger in the room "just to watch kids playing a game".

Observer

On the following Monday, Moonvigil began at exactly 9:30, actually at 9:20 because the teacher discussed the meaning of various words that were going to appear on the program. The teacher also discussed some of the posters (pictures of the moon and astronauts in a space ship) hanging on the blackboards behind the T.V. During the countdown the students did not do anything much about the program, they talked with each other or just stared at the T.V. with puzzled looks on their faces, and some asked other students questions regarding the program such as "What's going on, what's going to happen". During the countdown, the teacher quietly informed me that he had the class listen to the tape of the Apollo II flight (the real one) on the recorder on Friday afternoon, and that he explained to them that the Game would be involving them in the problems of being on the moon. There was one T.V. set and the Class was divided into two crews before the broadcast. The classroom's regular seating plan was such that the Class was divided into two groups anyway, therefore there was no really new seating plan to be arranged for Moonvigil. Also, the classroom itself was traditional and the school system was run according to the old system (not rotary, the students had the same teacher for all subjects but French). As I can recall, the students watched the broadcast very attentively but did not hesitate to ask their fellow pupils questions about things in the program which excited or confused them. This resulted in a great deal of noise during the broadcast and very many loud "SSHH's" coming from the other students who were trying to listen. The student seating plan was also set up so that there were three groups for each of the two groups that made up the classroom previous to the broadcast. I asked the teacher about this later on another Moon Day and he explained to me that this was the regular classroom set-up and that it had been this way since the beginning of the school year. When Mission Control gave orders to the two crews in the class to divide into two groups, the students looked at each other and the teacher, and no one moved an inch. After the broadcast the teacher asked the students why they did not switch into the two groups and one responded saying that he did not think they were supposed to do anything except watch. The teacher then quickly asked them to and they did. They formed their groups according to what looked to be proximity, those closest to each other according to the seating plan at the front of the room formed one group, Blue Group and those closest to each other at the back, according to the seating plan also, formed the other group (the third group in the middle divided up to join the one group that was closest to them according to the seating plan, either Red or Blue Group). As far as I can recall, the teacher was asked the most questions on Moon Day 1 and because of all the confusion the teacher decided to modify the game a little bit and answer their questions as well as allow an extra 10 minutes to complete the follow-up activities (40 minutes for follow-up, 50 minutes for the game that day). If any instruction was misunderstood the student asked either one member in their group (one who was consulted by most, this one was obvious because this person or member would be the one doing the most talking, yelling or directing and also the one whose shoulder was tapped the most) or the teacher. No one in Red Group started a countdown for the end of Moon Day one. After Moon Day one, the teacher gave out the diaries and discussed the meanings for some of the words used on the program and also the meaning for some of the instructions. He asked that the ones with diaries stay in for recess and fill them out.

On Moon Day two the Orange Group was formed during the broadcast students went back to original seating plan - went back to three groups of desks, a few students did not return to their original place, but stayed with the group they had joined. For instance, Vince, from the back of the room originally, stayed with Red Group rather than going back to his regular seat which would make him a member of the Orange. The members of Red Group for both crews also for the first time joined in on the countdown to the end of Moon Day two. Most students joined in on the countdown before the broadcast. I don't recall the teacher being asked any questions except those concerning the instructions. He was not asked any questions when he was not in the vicinity of the students. On Day one, the students approached him and on Day two only when he was very accessible (allowed himself to be by walking around the room and looking over the students' shoulders) very close to the students that he would be asked questions. In the crew I was observing the Orange Group did not get around to the health and morale interviews, they either did not understand the instructions or that they were supposed to carry them out or they did not get the message right. It could be that they did not want to do it (I do not think this last suggestion is very possible because the question of the interviews was not even discussed and nothing negative was mentioned). The Orange Group and the other two groups in the other crew were vigorously engrossed in the exercises, etc. At the end of Moon Day two the teacher went over the meaning of words used in the program (the new words) as he did at the beginning of Day 2 (discussing words used in Day One). The teacher again asked the students who had the diaries (now members of Orange Group as well) to stay in for recess and fill them out. The teacher had a member in each group choose who was going to hold the diary for the group. The member who was chosen was called the President in that case - the case for Red and Blue Group diaries as well. At the end of Day two I noticed that the teacher had assigned a student to place the kits on either side of the T.V. at the beginning of the day.

On Moon Day three, Loopie captured the greatest attention together with Dr. Ash (an addition to the scene). The students were heavily involved this day, Red Group trying to get the message to Blue and Blue leader helping the Red get the message properly for them. This was the day that a crew member, Patricia of Blue group emerged as leader and assumed authority. She checked and counted foodsticks and rigorously recorded on the log sheet the number of DOA foodsticks left at the end of each "Feed". She was also the one to initiate Blue group helping Red Group with the message and she also made regular checks on the other members and also the members of Orange and the Orange leader. She helped them out so that they knew they were to give the Health interviews. She asked Walter to get out of Orange Group's business because he was neglecting his own work and leaving it all to Peter (Blue member). Blue group's effort to help Red Group out and get involved with the leader's attempt to help Orange Group as well, evidenced a fact that the students were very much involved in the Game. Also during the broadcast there was less noticeable disruption such as talking, or general noise. There were a lot of smiles and chuckles on most faces watching the broadcast and diligently carrying out the instructions during follow-up. Often Patricia and many other group members would maintain a serious look on their faces when giving out instructions or carrying them out. The teacher practically pushed his way into the groups, picked up log sheets and gave accusing looks to the students, etc. He did not hesitate to say to most of the students when asked a question that he was invisible, although peering over shoulders and removing log sheets out of kids' hands. He often answered questions when asked and occasionally turned the students away. Blue Group filled in time by helping other two groups - Orange Group was the only group that I observed to have made up jobs and job lists (written). In Blue Group I saw that they had formed a President as in Red and Orange, and a garbage man to throw out the food wrappers but other than this the jobs were not very clear.

On Day four the countdown before the broadcast was something in which everyone participated. This day, as for the Moon days previous, the teacher mentioned the meanings for words used in the program, before the program and at the end of the (each) Moon Day. There was much less talking on this day during the program and as far as I can recall I believe this was the first day that the students took notes of the instructions given by Loopie. The students were involved very much during the program, watching attentively and taking down notes but they were not as attentive during the follow-up activities. After the navigation game was played the students started to play other games related to Moonvigil. The Blue Group Leader (crew leader) was originally responsible for the rules of the navigation game as they were understood (only one member of the group navigated). Some students sat back and watched the rest play or the doctor making people do exercises. The Blue group was kept quite busy by the leader. They counted out foodsticks and the leader gave them out to the other groups while the rest of the group played the navigation game. She was most efficient. She had arranged the activities in this way each day - she would carry out the daily Blue group activities while the rest of the members carried out the latest instructions for the group given by Loopie. She also checked that the rest of the crew was carrying out their duties. When Red Group won the Game, Patricia (Blue - crew leader) asked if she could see the score sheet and check if they really won or not. She was told by a member in Orange Group that they cheated and she agreed. A lot of argument arose as a result of this and she quickly made the crew quiet and gave out the foodsticks. At the end of Moon day 4 when the teacher was reviewing the happenings of the Moon day she lost no time in reporting her fact that Red Group cheated!! The groups fought with Red (Blue and Orange united to do this) and displayed group identity more than crew identity.

On Day five, Loopie's instructions were confused as they were for the navigation game and group lists, but this was only what I could see. In front of me were pupils asking Patricia why they were not hospitalized, she gave them an answer and I did not hear it. I found out later that she had picked up from Loopie that the square foodsticks were contaminated and she had not given out any way yet, she was saving them until just before rescue. She wanted pupils to find the circles and triangles first. Red group took down the codes and Blue and Orange as well. Red Group ran out of punch sheets so Mime appointed Kryshia as the Secretary who would make up duplicates for them to use. They were increasingly more involved as the follow-up continued, when there was nothing to do there was a lot of argument and pressure was put on the Presidents to make work. Pasquale demanded that he help the secretary make up the new punch cards quote "It will take you millions of years to finish that, let me help you". Later he said how unfair it was that Mime and Kryshia got to do all the work. All members boisterously joined in the countdown before broadcast and for the end of Moon day all voices competed to be the loudest deliverer of the time left for Moon Day. There were many comments like "I hate Moon Day, everybody yells at the same time and you can't do your work". "I hope Moon Day does not end" "I don't want to get back off the moon".

On Moon Day six the countdown was as boisterous as ever, both before the broadcast and after (at the end of Moon Day) the teacher reviewed Moon Day 5 before broadcast and day six after it was over. All pupils responded as they had throughout all of the Moondays - very well. They all fell out of their seats trying to get the teacher to see them so he would have them answer his question. They were just as excited about the reviewing as they were about the broadcast and follow-up activities. Jobs were changed within the groups not between groups. The leaders in Blue and Orange felt that the President was not a job but a position and that it should not be changed, after a lot of arguing they decided to vote for new leaders. The leader or President changed in Orange and in Red, but not in Blue because Patricia wanted another election because she felt that Walter who was just elected was not good enough for the position. Through it all she managed to keep her job. Cindy in the other crew said to the teacher after that she did not like her new job and the teacher asked why. "I had a nice job before" Cindy explained. Teacher: "What job?" Cindy: "The President". The members in their new jobs responded without question to them and did not need explanation or assistance.

On Moonday seven everyone avidly joined in on the countdown right from the 2 minutes. The teacher was careful not to have the T.V. set on before the broadcast as he had also been careful on all of the previous Moon days.

Patricia for Blue Group and John from Orange Group said in the Review time that they had written up their job descriptions on Day six. From what I can recall, the leaders or Presidents were the ones to assign who does what job (with some conflict with other members "I want to do his job not hers") and what the name of that job will be. The Orange Leader said that he and the group were going to give out the sheets to the other groups, they never got around to it. The Blue leader and Red leader went to pick them up for their groups themselves. Patricia demanded that her group help her count out the foodsticks. Her group formed an assembly line: one boy counting squares, another circles, another triangles. Another was recounting each and Patricia recorded what number was left of each. She then distributed them and had everyone sign in the allotted space under the kind they took. She asked them which they liked better. I did not notice one kind to be picked more than another. They looked at Patricia strangely when she said what kind and then they mostly said "I don't care, what you got?" After when everyone started to argue about some getting more than others, Patricia (because of the obvious chaos) began to throw them to those who said they only had two or three. She threw them from where she was standing, on top of a chair.

Debriefing Day One: The teacher on repeating Dr. Parnell's instructions based on his own feelings that they would need it clarified for them. From the way the kids responded I feel that they probably did need it. They all paid close attention when he spoke and had many questions to ask. For example: "Who does interviews, just my crew?" "Why can't I interview yellow card people?" (he had a yellow card). The pupils got a chance to interview two people. There was a lot of running around and excited laughter and jumping about. The pupils responded very positively to the Debriefing exercise. They all wanted to read their sheet and tell the teacher their experiences. The shyest girl (only one who was really shy) in the class was raising her hand more than her usual response and answered the teacher without interruption of any sort - laughing or embarrassed behavior.

Debriefing Day Two:

Some of the answers were different from my observations, but most answers coincided with what I had observed very well. The one that was most striking was my observation reporting that the crew had not understood hospitalization procedures given by Loopie which was not true at all. They had not given out any square units so no one needed to go to the hospital although some asked to go. The excitement and obvious involvement in the game was just as evident on day two as day one. The interest was a little less captured than it was during the actual moon days, but it was still quite entrenched. It is hard to make this judgment of interest, because debriefing is a much different sort of activity for the students than the moon day activity. The students were more than eager (falling out of chair trying to get the teacher's attention in order that he would ask them to answer) to get involved with the question and answer activity of the Debriefing Day. The teacher took notes of the Moon Days and their activities as expressed by the students.

On Debriefing Day 3 the teacher used the notes to start off the talk about the need which existed and therefore the reason for all the activities carried out for each moon day referred to pupils note books in which he had the notes on board copied. He discussed the need in general and asked the students what sorts of needs do they have and how are they supplied everyday. The students responded giving names of institutions - like organizations such as the family and the community which supply the daily needs, along with the firemen, policeman and transportation. "The church to keep us holy". The teacher asked the pupils to form groups in order to research 6 institutions and find out how each came about and why are they still existing, who does what, etc.

Reflection Day One and Two: Day one: Teacher was discussing with students how to most efficiently go about doing their project. Day two: The students were busy working out the presentations themselves. I am going Thursday to get the information as to how they deliver and what they deliver in their projects.

(Editor's note: A variety of pupil material was submitted and is available from the OECA Research and Development Branch).

Pupils

The first diary writer in this class was a rather inarticulate girl who headed each page of her diary "LUNEX 12", and started off each entry "Dear Sur". She does not appear to be too involved on day 1, and says that day 2 "was not much more than the first day". On day 3 her group had a problem "could not get the message because they were on the wrong letters". Her group made a list of the "colours of the group's hair. People were arguing about the colours of their hair. We were running around not doing our jobs." On day 4, "I did not have fun because there was too much yelling and I was sick we played a game called the squares". "It never comes a new day unless we do something different from what we do". Day 5 was "a little better ..today it said if you ate square food sticks you would be contaminated and you would have to go in a comer and nowbody can be near you or talk to you". Day 6 "we had to tell how we feel... I put a check mark not well.. and it's true". Day 7 "again same as very ... but we had to finis all space food sticks. Goodby for a very long time". The next diary writer was most concerned about the space food sticks which she didn't like. On day 2 "I guess I'll have to live with those space food sticks", but on day 7 "I hope we don't crash land again because we have no more food sticks". She found day 1 "very interesting". Day 2 was "more fun than yesterday". Day 3 "easiest of all days". Day 4 "Today we played a game I can't remember what it was called but it was fun". Day 6 "We also changed jobs and I became Vice-President for the day". She enjoyed debriefing very much, "We talked and talked but it was fun". On reflection days she says "Today we are going to make a project on Moonvigil what our group who picked to do for our project was hospital. My girl friend and I did the writing and the boys did the pictures". Another writer was upset because she felt "our group wasn't organized well". "We were still behind our group is the slowest of all the other groups". There was considerable conflict over leadership in this group. The President and Vice-President were two friends who picked each other, and then chose the diary-writer to help them. The President was somewhat "bossy" and "complain with all of us". On day 5 the Vice-President suggests that they pick better leaders, but the diary writer disagreed. "I said no because we are just wasting time so we didn't". She enjoyed debriefing but did not elaborate on it. The next writer enjoyed herself when she was active, but felt let down when there was not much to do. "I didn't enjoy our second vigil moonday because not to many things to do". "I didn't enjoy our 3rd moon vigil day because we got lost without the message the computer gave us". "I enjoyed the fourth day because we played a game and we won the red group". Day 5 was good, day 6 not so good "We did not do many things to do". Day 7 was great because "We to finish all the food sticks we have left". On debriefing day 1 "today is the best day of all. Today we were back from the moon". There are no references at all in this diary to either conflicts or leadership identification. The only boy writer in the group concentrates on conflicts, however. "Two boys in the groups... were laughing all the time. They always disagree on what we say . Also everyone wants to be captain. Finally we picked John and he made me second captain". The diary of the last writer is a careful day by day account of directions given on the television. For example, on day 2, all six points of procedure A are outlined. The only direction from this pattern, and the only personal note comes on day 4, when she says, "I'd like to change my group because their is all boys and 1 girl, I like to have it three girls and three boys". On debriefing day 3 she says "We talked about groups. I think groups means friendship, helpful, getting together, sharing with each other, getting along with each other".

The teacher of this class was successful in drawing from his pupils a concept of institutions based on their moonvigil experiences. All of the pupils became involved in follow-up activities.

DOUM ELEMENTARY SCHOOL

The class I observed was a grade 6 of about 35 students, fairly evenly divided between girls and boys, in a public school in one of the suburbs.

Observer

Preparation:

The teacher was not able to attend the Moonvigil workshop, had engaged the class in no pre-involvement activities, in fact had given them little or no information about Moonvigil before I visited the school, and had not read the teacher's outline when I first met him. He did not introduce me to the class on my first visit or at any time after that. Shortly before the broadcast on Day 1, he briefly told the class about Moonvigil, and played a recording of T.V. broadcasts on Man in Space which included the U.S. astronaut's landing on the moon. The teacher divided the class in half, reading from a list he had drawn up, before leading the pupils into the viewing room on Day 1. There were roughly an even number of boys and girls in each half.

Room:

Moonvigil was not held in the regular classroom, but in a large room usually used for art and music. Since this room had chairs enough for only half the pupils (in addition to an assortment of tables and an upright piano), on Day 1 the boys of the class were instructed by the Teacher to carry their own chairs down the hall to the viewing room. On subsequent days, boys and girls took turns carrying chairs because, as the teacher said, girls are supposedly as strong as boys. There were two televisions in high movable stands placed in opposite corners to each other so that the two crews would be facing different directions for the broadcast. Immediately before the broadcast on Day 1, the teacher moved the tables and the piano into a line lengthwise down the middle of the room. Both crews had access to blackboards, but only 1 crew (unobserved one) had direct access to the exit. Teacher had put E.P. kits on tables near T.Vs.

Television Reception:

On Day 1, the teacher had turned on the T.Vs before class in order to adjust the sound and picture, but unfortunately he had the wrong station on and therefore when Moonvigil began he frantically played with knobs for a minute or two. He was finally able to get 1 T.V. working (on the side of the observed crew) but the other T.V. did not work at this time or at any time during the 7 days of Moonvigil. For the first few days the teacher tried to get both T.Vs to work properly, but he eventually abandoned this, finally using just the 1 T.V., which often had a background hum or buzz and occasionally a fuzzy picture, but generally was adequate and could be seen by both crews.

Teacher's Role:

The teacher had not given the students much preparation for Moonvigil. He set up the room for the game, turned T.Vs on and off throughout (except for once when he asked me to turn off the T.V. and once when he was out of the room Mike E. of Blue group in observed crew turned T.V. on and off). The teacher made obvious efforts not to interfere when the game was going on, not to direct the children's activities. For example, after the first broadcast, all of the children just sat for what seemed like hours (really about 10 minutes), making no move to form into groups or to approach E.P. kits. I do not recall that the teacher said anything to them. He went to both E.P. kits, casually touched them as he slowly walked around the room. But a little while more passed before any of the children went to the kits. When children asked him questions on the first day or two he ignored them. Finally he wrote on the board, "The other crew does not exist and neither does Mr. Jones"(His name). During follow-up activities after each day's broadcast the teacher would walk around the room, sometimes taking notes of his own, but never talking to pupils that I can recall. When pupils made noise (and this was often) he said nothing. Perhaps twice in the 7-day period he reminded them to keep track of their log sheets and diaries, and to bring garbage bags, pencils, etc. with them, but never during the Moonvigil period. The only instance I can think of in which he interrupted the class during follow-up activities was during the navigation exercise. It was obvious that most of the children playing the skylab game did not know the proper rules. The teacher asked me if I thought he should help them out. I said to do whatever he would do if I were not there. He then announced that he was Loopie the computer, repeated Loopie's instructions for doing the exercise by reading from his teacher's manual, then signed out and "disappeared" again. This teacher's most crucial act came early in Moonvigil. Concerned that pupils were leaving the room to get drinks of water or just because they felt like it, and that there was occasional interaction between the two crews, he told the pupils (after I had left) that if anyone left the spaceship he would be "dead" if he interacted with a member of the other crew he would be "dead" because the other crew did not exist and was to be considered evil spirits (this is illogical - either one exists or one does not, but the children did question it). The children asked him if a person who was pushed out of the space ship would be "dead" he said they should be able to decide that. This introduction of death became a mechanical means of eliminating members that the crew either did not want or felt like horsing around with. Eliminated members were given assignments to do outside the viewing room.

Major Modifications:

The above-mentioned elimination of members was the most noticeable modification of the game. In the observed crew, when Mike E., leader of Blue group discovered (on Day 2, I think) that there would not be sufficient food, he immediately said, "We're going to have to eliminate some people - at least 3". One girl he simply told she would be let go in a day or two(for some mysterious reason this girl never was eliminated - several others were however). Over a period of several days, two or three boys were told to leave (I'm not sure why). Therese, diary keeper for Red group, was asked to leave, which she very quietly did. Nicky and Frances had to try to push each other out; whoever pushed the other out could stay in. Frances was the loser. Carolyn, a friend of Frances, announced that she was leaving after Frances went, picked up her chair and walked out. Some of those who left were people without specific jobs. The food shortage and their lack of a job made them expendable. In most instances there was no physical force involved in their leavetaking. The crew went from 17 or 18 to about 11 or 12.

In the other crew, pushing people out of the room became an extension of the noisy horsing around that went on much of the time in this crew. Three or four children (usually boys) would literally drag another child (again usually a boy) out of the room. Sometimes the victim would resist by picking, holding on to furniture. By day 5 or 6, only eight out of an original 17 or so were left, only two of them boys.

Another modification occurred in the navigation exercise. Since Mike E's Blue group was ready to play it before Diane of Orange group got around to it, Mike simply took the space maps and markers out of Orange group's supplies and made up what he thought were the proper rules for playing.

Involvement and interest of pupils:

During the broadcasts, especially after day 1 (which was confusing to the children), the pupils were usually very attentive. Someone from each group would take notes pertinent to his group. Most students would watch the screen most of the time, although when there was an interview with a scientist or a press conference their attention would wane.

During the follow-up activities, degree of involvement varied in the different groups. Red group, all girls, appeared to suffer most from lack of enough work. After decoding messages, which could keep three people busy for about 5 minutes, Red group had nothing to do except undergo health and morale tests and exercises. Often some of the members would be sitting quietly for most of the follow up period. (There were not any books in this room - it was not the regular classroom). Some would watch others taking balance tests, which tended to become a slightly competitive game.

Blue group members (all boys) likewise had little to do once food sticks were distributed. Like Red group, Blues would often watch someone doing the balance test, would sometimes count along. Occasionally Mike E. and another Blue would look at a moon map provided to each crew by the teacher. Toward the end of Moonvigil, Mike E. and the other Blues became noticeably restless, sometimes banging on things, switching the T.V. on and off, wandering around the room aimlessly.

Orange group (even number of boys and girls) had to take health and morale reports of all crew members each day, and had to administer balance and blind finger tests. They (all members) usually had enough to do for the entire period. Toward the end they may have become a bit tired of timing people on balance tests - they were not as scrupulous about watching to make sure the subject's foot was not touching floor - some of them counted very quickly. But this group almost never horsed around, made noise, or just sat.

Leadership Acts or Roles:

In Red group there was no real leader. Therese, the diary keeper, gave directions on decoding for the first few days but the skill was easily mastered by the others. The group had so few tasks that some would have had to be invented for leadership to be shown. When Therese and other Reds were eliminated, only three girls were left in the group. One was more talkative than the other two and gave them their jobs but did not really direct them beyond this.

In Blue group, Mike E. was the leader, did all the arithmetic required for budgeting food, made up directions for space navigation game, determined that job changing would occur within rather than between groups, directed the elimination of members from the crew.

Diane was the leader of Orange group (had started out in Red on Day 1, was leader of crew then, had called for more organization). She read directions for procedures, helped others with their jobs, answered their questions when necessary.

Major Events:

Space navigation exercise - Only Diane's Orange group, which had the directions, played this game correctly. Mike E. of Blue group made up rules for it because he did not know the proper ones. There was no attempt in this crew to compare notes on what group won. At debriefing Diane said she could not see why they played it, although Mike E. enjoyed it. The crew did not opt to play it a second time and, in fact, did not mention it.

Hospitalization:

Since 2/3 of the crew went into isolation, there did not appear to be any shame connected with being "sick". Those who were "healthy" made great efforts to avoid physical contact with the sick members. But the sick had too little space, moved furniture barrier toward the healthy, who fled in mock terror until they had enough room. Diane asked for extra food for the sick but Mark, outside barrier, refused to give it to her because of food shortage.

Change of jobs:

Diane of Orange was ready to give up Orange group, asked for volunteers for Orange group, but Mike E. said that they were not supposed to change groups so change took place within group. Mike E. gave diary and log sheets to others but I could not really see any great changes in the activities of the others.

Group Identify:

Members of observed crew wore buttons throughout, sat in groups (except for 1 or 2 each day) during broadcast. Mike E. refused to change jobs outside of the group, although Diane was willing to do so. When Diane saw Mary of Red group performing an Orange group duty, she told her she could not do it, it was not her job.

Assumption of Roles of Crews Stranded on the Moon:

The children did do some role-playing - e.g. expressed concern about food shortage, were very frugal with food supply, were careful not to have space ship, but I am fairly certain that they considered it a game.

Debriefing:

In observed crew, all but 1 (that I could see) interviewed two others. Teacher became quite active in debriefing sessions, sticking fairly closely to questions and guidelines in Teacher's Manual but adding many of his own. Attentiveness of children during debriefing sessions was usually fair to good, occasionally poor (much fidgeting sometimes - some interruptions from outside during class which were distracting).

Teacher invited eliminated members to interview rescued crew during debriefing exercise. About six came in, assuming roles of reporters and scientists. Entire class was included on subsequent debriefing days however, which were held in the regular classroom.

Since teacher went around room and asked everyone to respond to some of the questions during debriefing, everybody was involved to some extent. If left to the children however, only about five or six would volunteer answers regularly.

Reflection activity was a series of dozens of questions and answers in which the teacher tried to take the children through the development of society from prehistoric days to the present, basing the discussion on human needs as defined by the children.

Because of the modification introduced by the teacher, this set of diaries is radically different from the others. It is interesting to speculate whether the game would have been played differently, had some of the food not disappeared. My own feeling is that the children would have found another reason for "eliminating" members. Once the ideas of "death" and "elimination" had been introduced they were too powerful to ignore. For example, there is no suggestion anywhere - in the diaries, or in the Observer's daily reports or summary, that any one suggested the dividing up and sharing of the remaining food sticks as a possible solution.

Pupils

Only one diary writer was not particularly concerned about the problem. After some initial enthusiasm (day 2) "I think its real neat to check everybody", and her very detached statement on day 3 "nothing much happened except for someone being kicked out "she quickly peters out. Day 5, "This game doesn't make sense. Moonvigil is getting more boring". Day 7 "Finely we were resqued. I kind of glad we were resqued because I was getting sick of moonvigil". Another writer is enthusiastic about the game and materials. She feels her group is well organized and doing well. "We are really going now and I am very pleased with our progress". She is worried, however and says on day 2 "I do not think other people should be allowed to throw other people out". Day 3 "I have been giving it a lot of thought and disagree that our teacher does not exist". A third writer enjoyed the game and found that his "orders from Mission Control were easy to understand and do". He had only one problem "...it's hard to pick out who to illiminate because some people we need and some we don't". On day 4 there is a cryptic entry "today during the T.V. broadcast Loupy got another message. In it was the true meaning of peace". He is elated at the thought of getting off the moon. Day 7 "So tomorrow we will be back on earth YAHOO!! I sure am happy". Debriefing day 1, "WE'RE HOME. and am I every happy!!!! His relief gives way to bore on day 2, and he is enraged by day 3. "How I absolutely positifly HATE IT. Now we only talk about people more sivelized than the guy who thought this thing out. THE CAVEMEN". The remaining 2 writers, (only 5 diaries were completed) appeared to enjoy Moonvigil and had little difficulty with it aside from some confusion over the navigation game. Their diaries however, contain the most telling comments about the "elimination" of members. One says on day 2 "Today we were robbed of our food supply. The person is still unknown, we are sure he or she will confess. We are going on a diet". Day 3 "Today we wiped out two members and now have a lot more food units. We figured out how much we had left...we have to dispose of two people". Day 5, "Now we have 8 people remaining in our crew. We are not killing for food we are killing for the sake of it". Day 6, "We have 6 members remaining in our crew. We have also 6 units of food left". The other writer says on day 3 "Some people have to be elimeated because there is not enough food because of the mix-up. I wish nobody had done that. Our teacher says if you look at any other member of the other crew your dead. And anybody can push anyone right out of the group he says he just doesn't care. See somebody asked if they had to have a good reason for kicking them out. He said no he doesn't need a reason. So the boys are kicking the girls out. What do you think of that? P.S. All the girls think it's unfair". Day 4, "2 boys were kicked out today". Day 5, "We're trying to get just one more person out. Now it's harder because I'm in quarantine. So we're getting her out on Monday". Day 6 (different writing) "Today we kicked three girls out one girl was the one who did the DIARY. I was tested on standing on one foot... and got to something like 33 because I thought some people were trying to kick me out."

Three debriefing days were carried out, and looked fairly good in the Observer's daily reports. However the only comments about these in the diaries, aside from the angry one mentioned above and "I don't really like it because we already know what we have done", and "Today we did something strange called antropology we talked about things that didn't apply with Moonvigil".

Teacher

This is a grade six classroom in the metro suburbs. Moonvigil was played in a spare classroom which the teacher felt was fairly suitable. There were two television sets used, one at the back of the room to one side, the other at the front of the room to the other side. A barrier of desks and other furniture divided the two crews.

The teacher heard of Moonvigil through the Resource Librarian. He has never participated as a player in a simulation game or conducted one in his classroom. He considers himself a moderately progressive teacher, and uses television as a teaching tool three to four times a month. The decision was made to use Moonvigil because, "I like to try out new ideas - I have an active class and I thought they would enjoy taking in an active rather than a passive role while watching T.V. He did not attend an OECA workshop.

Pre-involvement activities lasted about one hour. They consisted of listening to a record of Apollo 12 and a story from the reader, followed by class discussion. The class was not too well involved in this. He says "I didn't realize there were pre-involvement activities until the week-end before the programme. I would have liked the class to have done some research and to have set up their spacecraft".

He felt that the Teachers' Guide provided him with a moderate amount of confidence, and competence for using Moonvigil. The Emergency Procedure Kit and materials are described as "quite good".

About half the class carried out their duties and interest appeared to wane during the week of broadcasts. None of the pupils were "very involved", but the high academic achievers and highly motivated students were well involved, the low achievers and those with low motivation were not too involved. The average achievers and those of average motivation fell somewhere between the other two groups.

The teacher feels that all 7 Moon days and 2 debriefing days were moderately or quite successful, except for day 7 which he thought was close to a failure because interest was beginning to wane. On day 1 "the class did not follow their instructions carefully enough. I feel that too much was expected". Day 2 "Group leaders began to emerge. The members began thinking about their food supply". Day 3 "Evidence of group pressure toward members who weren't pulling their weight - two members decided to die (quit)". Day 4 "Both crews seemed confused by the space navigation exercise. Those who attempted it made up their own rules. Several members began to lose interest. Four were forced out by the crews". Day 5 "Both crews accepted the idea of food contamination. They set up hospitals and their own cures. Two more members were forced out. Group and individual pressures were exerted". Day 6 "Crews traded jobs. Two people were forced out and one quit".

He felt that his role of observer was quite easy, and hardly ever had to assist the pupils during the Moondays. On day 2 there was trouble with both T.Vs, so he went over the instructions with the class.

This teacher does not consider that his introduction of the ideas of death and elimination is a modification of the game. He shows no surprise at the pupils' reaction to it (see daily quotes above) and even suggests provision might be made in the game for those eliminated by their crew or those who want to quit.

Of debriefing days he says "Many members didn't volunteer answers unless asked. Several were direct and honest in their opinions. Revealed Moonvigil was a learning experience". "We discussed how society formed and how institutions developed along with it".

Reflection days (he is planning four or more) will take the form of interviewing people in the community from a questionnaire made up by one group. "The class will be reading the answers of the questionnaires to the entire group and we will be discussing further the roles members play".

His personal expectations for his pupils during Moonvigil were threefold: To have an enjoyable learning experience, to learn something new about their classmates, and to work together without an adult's influence. He feels these expectations were mostly fulfilled.

He is not sure that he would use Moonvigil for another class, but would recommend it to another teacher, but "It would depend on the teacher. I feel that if the teacher is the type to interfere with situations that might arise, then there is not much point in doing it". He would use other programmes which provide a complement to classroom activities, and is particularly interested in the History of Canada. He feels the students could be put back in time to act out situations.

ELM ELEMENTARY SCHOOL

Observer

In general, the students would appear to have enjoyed the Moonvigil experience. They appreciated the freedom which the format of Moonvigil offered- i.e. the escape from the authority of the teacher, being able to organize their activities on their own and to make as much noise as they wished.

The students had no trouble interpreting any of the instructions, and with perhaps one minor exception, performed all the required activities in the prescribed manner. They did not make any significant innovations on the structure of the game. Their general attitude towards Moonvigil appeared to be based on a strong desire to do things "right", to complete all their activities in the allotted time. Running contrary to this however, was the fact that the game did not present them with any substantial challenges. I often overheard a student remarking that something was "easy" or "a cinch". This was particularly true of the space navigation exercise which they did not choose to repeat when offered the opportunity to do so. Their desire for challenging activities was also revealed during the exercises. The first few days they showed a strong competitive element in the performance of the exercises. However, as they came to realize how simple these were, they gradually appeared to become bored with them.

While the pupils, then, seemed to be quite involved with the required activities of the game, they appeared somewhat to lose contact with the imaginative situation in which they were supposed to be placed. I did not overhear any references to their being on the moon, such as the little jokes or comments one might expect. They also found it at times difficult to separate themselves from the presence of the other crew and would look over to be sure that they were doing the "right" thing. There was, however, little actual contact or interaction between the two crews.

As far as the group structures and interaction is concerned, I would say that a fairly strong sense of group identity developed during the process of Moonvigil. There were no signs of conflict between individuals or between groups. They were capable of carrying out their required tasks and of working competently together. In each group a "leader" evolved, but in no instance was this person overly assertive. I did not observe any tangible evidence of resentment towards the leader on the part of any of the group members. The students tended to remain mainly in their groups. With one exception all the students were included in the activities of the group . This one exception was a boy in Blue Group who was rejected by the other four female members. From the occasional remark that I overheard I surmised that this student was generally held in contempt by most of his class mates for being "dumb" and "a slob". I also noticed that another boy, who was a new pupil to the school, and who had held himself initially totally removed from the Moonvigil activities, gradually came out of his shell and successfully integrated himself within his group and assumed a definite job role. Perhaps it should also be noted that in both crews, Orange Group was an all male formation.

If I were to choose the particular segment of the game that the children enjoyed the most, it would be the contamination and isolation situation. They reacted very positively to this, becoming quite imaginatively involved with the situation - i.e. keeping the contaminators rigidly isolated and taunting them with remarks about being "contaminated". The exercises were also successful, in that they got all the pupils involved, giving those who did not have much to do, a definite task to do. The students appeared most bored during the Space Navigation Exercise or on the occasional day when there was little to do.

I mention, in brief, the role of the teacher, he was completely non-participatory. Because the students had no difficulty following instructions, he did not find it necessary to answer any questions. The students came gradually to ignore his presence.

On Debriefing Day 2, not all the discussion was completed and a period of five days had elapsed since the pupils last thought about Moonvigil. During the Debriefing exercise which had occurred, five days previously, the students were quite involved and everyone was careful to interview two students. The responses were mainly standard, i.e. Blue Group - Food, etc. However there was an obvious split of opinion when value judgements were given as a response - i.e. Health and Morale Reports were described as both important and unimportant or the exercises as fun or boring. There was not adequate time for the teacher to discuss with the students the significance of some of the answers so the exercise was never really followed up.

On Debriefing Day 2, the students were rather sluggish and slow to reach. The teacher responded by being a little impatient. All the time was spent recalling the events of the individual days of Moonvigil and no generalizations were made. It would be impossible to estimate at this point the precise direction that the Debriefing is going to take, nor has the teacher mentioned to me his plans for Reflection activities.

Pupils

Generally the diary writers in this class enjoyed Moonvigil. On day 1 "When I first got my button for Red group it started to get exciting. Day 1 was interesting and it was a lot better than doing math or religion". Also "... we all thought it was sort of childish and we laughed and joked at it. It became exciting when the man started a countdown". The consensus was that day 2 was even better than day 1. " I enjoyed my first day in Orange group because I knew what I was doing". "It was fun watching the other kids try to do the exercises". "Everyone thought Loopie was funny". Day 3 did not present enough of a challenge to several of the diary writers, everything went along smoothly and "some people were bored with it and so was I and my classmates". "I'm being honest and I'm really getting bored". However on day 4 things pick up again. Everyone enjoyed the navigation exercise. "Today was better than yesterday because of the navigational test". "It was fun playing it". On day 5 interest continues to be high "it was good because of the food units, and it was good because of the insulation and contamination. There were better exercises". "A lot of kids outside at recess ask us questions about what we do each day. When we tell them they wish they were able to do it". "No one in our group had taken square food units and that spoiled the fun". On day 6 interest is beginning to drop off again. "Finally my job was changed because to this point I'm getting sick of always filling in the Daily Health report". "Some people are getting bored with the whole thing frankly writing this is starting to be a pain in the neck". On day 7 one writer says "I've really enjoyed playing operation Moonvigil and I would like to congrelate you on a very interesting and successful operation. Thanks for a grandweek." One writer, reluctant to give up the game says "I don't think we should have gotten off the morn so easily. We should have had to keep under isolation... that would have been neat". Another says "It's more interesting on television to have an interview. But some people in our group think it looks phony and children". The boy who was bored with his diary says on Debriefing day 2 "There was a great response from the students. I don't know what's going on. People that were bored, are starting to participate".

There were several references to time. One writer noted that her group on day 3 "found out that it would be easier if we timed the health test 2 at a time", as a result they "had time to put names of people on the daily morale test and daily health test for the next day". Several people mentioned that follow-up ran several minutes overtime on Moonday 4, which led one writer to reiterate (he had already suggested it on Day 1), "That is why I believe longer periods should be given". Again on day 6 "in my opinion more time should be given".

On day 2 one writer has a comment about leadership "Red group did not start or finish any of their assignments. In my opinion it was because of poor leadership, he has to do everything by himself, he won't let us do anything". This writer changes to Orange group and says, "I find it more enjoyable in smaller groups and less fighting over who will be leader. The present leader of Red group is no good but the rest of the members follow him because of his physical strength. But our small group of scientists there is no appointed leader we act as a democracy.. best way rather than having a dictator. But this only applies to small groups. In a large group there should be a leader, but the leader must be open to advice and criticism". Few conflicts (other than the above) are recorded, although on day 6 "The person who had to show another person how to do his job was always butting in and kept telling the person they're doing it wrong".

The two crews adopted different methods of dealing with the food crisis.

In one, "We split the food sticks in half today and tomorrow we will have exactly enough". In the other crew "they took all our names and put them in a hat and drew three names, and these three would not get fed tomorrow."

On day 5 one of the writers makes a suggestion about modifying Moonvigil. "All together operation Moonvigil is 7 days long, and a school week is 5 days, which meant that we would have to go into another week. During the weekend operation Moonvigil would not probably enter my mind and I would forget all about it. Solution - cut Moonvigil to 5 days."

It seems that most of the pupils were interested in debriefing activities, and perhaps the teacher missed a good thing when he didn't carry his rather intelligent class through to a discussion of needs, structures and roles and a building of concepts based on these.

FIR ELEMENTARY SCHOOL

Day 1

Observer

- Moon scapes around the room
- Cardboard space craft and robot
- Books on stars, the solar system.

Children were very quiet and attentive and were very excited about the playing of a game. The groups divided out on sex lines. Noise was high but activity was minimal. Kids were very excited about the space food sticks.

The girls in both crews were more organized and a leader emerged immediately in each. These two female leaders were to later remain with the leadership function for the remainder of the game.

In one case the girl leader just delegated roles to the other girls.

Boys seemed bored and frustrated. It seemed they were unable to organize themselves in any measurable way. They began to run about the room, chasing each other. They made physical threats against each other and in one case a fight emerged.

One group of boys held a quick vote to decide on a leader, but once that was completed, they joined together to make their own fun.

In one group there was a good deal of group interaction, but this soon dropped as the boys proceeded to amuse themselves.

General: the girls got most things completed. They are a well organized group. All kids enjoyed themselves either playing the game or playing another game.

Day 2

One crew segragated out on sex (and group) lines today, a pattern that was to remain for that group. However, the other crew sat randomly with no real distinctive seating pattern in front of the T.V.

Children believed they were two separate crews and when one person crossed over, they asked him how he got through the barrier. Also they believed the teacher was not on the moon with them.

In one case, Orange group was formed by a straight division of a boy group into four and four. In the other crew, Orange group came as a result of three and two girls coming together.

Through the game today a girl isolated herself on the teacher's desk and sobbed away. She was left there until she went to the teacher who then took her out of the room.

Orange group seem to be working well together. They have a boss rather than a leader, but they're enjoying themselves.

Boredom did not set in until just before the scheduled end of the game. In general attention was quite good, involvement seems to be improving and the kids are at least enjoying themselves.

Day 3

Initially kids were very hyper. They all began the countdown early and each seemed to want to outdo the other in the vocal area.

In one crew, there was no formation of Orange group, as Gary, a disruptive individual was in Orange group on Day 2 and had attempted to emerge as a leader.

Kids in the other crew were working together as groups within a single crew. They seemed to be enjoying themselves immensely.

Orange group was having fun with the exercises Red and Blue were working together on the decoding.

In the other crew, the girls remained together under their leader and left the boys to themselves.

No boys except Gary wore an Orange button and the boys spent the morning arguing, fighting and jumping about the room.

In general, kids had a good time, except possibly the boys making up Orange and Blue group.

Day 4

Attention is good today. They became noisy after they received the required information via the T.V., but while they are receiving their instructions for the day, they are quite attentive.

Boys in Orange and Blue group continue to fight and clock watch. Gary and Shortie are now wearing Orange buttons. Shortie returned to Orange because he did not want to give up his big journal to Gary and secondly, he thought Gary was not able to do everything himself .

Orange group in other crew had involved the entire crew in exercises. Attention here was good and involvement was fairly high.

Day 5

Kids are noisy before the broadcast and the teacher told them to pay attention.

Netta attempted to build an isolation ward and keep those that had eaten the contaminated food inside of it. As this was not done until near the end of the day, she stated that they must stay in quarantine part of the next moon day as well. Shen then promised them extra food if they remained in isolation on their own.

Attention was only fair, but the kids were having much fun today. The boys in the other crew made no attempt at involving themselves today.

Day 6

Kids not very enthused about beginning today. There was little interest seen in doing count-down together until the last few seconds. Kids were distracted and restless and couldn't understand the morning's broadcast.

They finished early and were highly disruptive chasing each other and generally acting silly.

With the changing of jobs Netta began a game with her group as each girl tried to remember her new job as well as the jobs given each member of the group. They too began fooling around towards the end of the day.

Day 7

Attention was low during the news conference but was good during the rest of the show. The teacher mentioned to the class this morning that if they continued to behave as they had been she would interfere.

Consequently behavior was good today. Less running about and no fighting occurred.

Kids were excited about getting the remaining food.

Kids did the exercising today as a group (crew) after they had finished the candy. They were somewhat involved today and were probably enjoying themselves.

Day 8

Kids were anxious to carry on the two interviews but needed much clarification of instructions.

Some kids expressed sorrow that Moonvigil was finished.

Kids completed the interviews, however they did not seem as enthusiastic about having the words placed on the chalk board.

Some of the kids went back to doing math and reading.

General:

The kids enjoyed Moonvigil and in any case most of them enjoyed the aspect of not doing any work for the 40 minutes each morning. Generally they were attentive to the broadcasts though after that, involvement dropped, and in some groups there was no involvement at all.

Pupils

The striking thing about these diaries is the vitality and energy of the children who wrote them. They loved Moonvigil as they watched it, or they loved and hated it, and did not hesitate to say so. One boy diary writer was really annoyed by the disruptive child mentioned in the Observer's summary. He starts day 1 by saying "one part I hated the most is when one of the boys in my group wanted to do everything his way and by stely (stealing) the food that came with the kit and by bossing the people in our group. He would start to grab us and you better pick me (for leader) or I will hit you after school". On day 3, both of these boys in Orange group "and then we had some trouble with one of the boys... wanted to be boss but we let him be boss so then he started to tell us to do this do that so all of the people quit and went into Blue groups except the one who wanted to be boss". Later, "the six day started out very well and then it happened again, the same boy start to make trouble he started hitting us and stealing our food units". In spite of his difficulties, he says on debriefing day 1 "we got back to earth and it was bad awful to be back on earth, it was a lot of fun to be on the moon for a long time". Debriefing day 2 "... I hated it." One boy who decided to rejoin the disruptive boy in Orange group so that he could continue to write his diary, found himself doing nothing on several days because (day 4) "we are only two in Orange", and on day 6 "today there was not much to do because I could not do everything myself". About the fracas on day 6 mentioned above, this boy says "but still one member of the Orange group would not cooperate. There was a fight and one boy got hurt. I don't know what the fight was about because I was minding my own business". One boy appeared to be considerably disturbed by the noise and chaos of Moonvigil. Day 2 "But my feels were not good when every was talking and fighting". Day 3 "My thoughts about Moonvigil are good now, I hope noise keeps down". Day 4 "My feels are bad I do not know what to say, but they are just bad, bad bad, and I do not want to be in it. My ideas are to tell teacher to not let me be in it and try to make the boy do what T.V. says". Day 5, "ideas of my is to tell the teacher to not make me do it. I would also tell her if this talking keeps up she should stop it".

The girls, on the other hand seemed generally to enjoy themselves, "I was so happy I couldn't wait". They admit their confusion in many situations, and although one insists that she is doing things properly at all times, the others are willing to talk about their mistakes. There is some resentment of leadership shown by one of the girls, "I didn't do anything because one girl is in charge of everything. Well she doesn't share what she does. She always does the good things and gives us the hard jobs". They all enjoyed Moonday 7, "We are all glad to go back home. When we got the news we were all very happy". The one girl leader who delegated roles to the other girls (see summary), and who has been described as "bossy" in the observer's reports, starts out her diary by saying, "Today I hated operation Moonvigil. I am in the Blue group and it's just sicking, all I do is distribute food and write the log daily report". However, her enthusiasm builds as the days go by, and she is the only one of the writers who appears to be playing a role. She felt that the responsibility for getting back to earth was that of the crew itself, and shows a tender concern for them. Day 2 "We have a lot more to do. In eight days we have to find a way to get back. We must all try to survive during our stay on the moon". Day 3 "We have seven days left in finding a way to get back to earth". Day 4 "we have six days left to get back to earth. We don't think there will be enough food to supply the crew with so we must do more hard thinking".

The group seemed generally interested in debriefing. Day 1 was "funny". On day 2 they discovered some of their mistakes, for example, the navigation exercise, "none of us did it right according to the rules". "... the Orange group made a big mistake. The exercises they did the whole crew had to do. But they said that we didn't". There is no evidence in the diaries that the teacher attempted to help them generalize their experience or to tie it in with a concept of Institutions.

JUNIPER ELEMENTARY SCHOOL

Involvement

Observer

The pupils have been involved from Moonday 1 to Reflection Day 1 and are still going on. Each day all the respective group jobs were completed before any fooling around occurred, if it occurred. The children were always very, very keen to group up and start their activities. When the prescribed jobs were completed, some unrelated events would happen, e.g. book reading or writing on the chalkboard, but in general the pupils were involved in Moonvigil. The daily debriefings by the teacher showed a genuine interest in doing the game properly, e.g. "Some people act silly. Maybe we should help others instead of fooling around", and in participating in all the activities, e.g. "You have to do the space navigation game (on the day when there was the option to play)".

Attentiveness

The crew members were very attentive to Loopie and anyone who gave instructions during the broadcast itself. Otherwise whispering, moving around or looking around usually occurred. As indicated under "involvement" the pupils were attentive to their jobs, health exercises, foodstick eating, etc. When these activities were over some pupils would lose interest and do other things at times, but this was only when they felt there was nothing else to do.

Enjoyment

The pupils have enjoyed themselves during Moonvigil as they are still going on with reflections and are very involved in the research groups and the topics that have been chosen, e.g. police, transportation, fireman as "basic needs of our society". The jobs were enjoyed since they were always completed. In particular the health exercises were always done willingly and with smiles. Naturally the foodsticks were enjoyed. Each day the crews ran to form their groups and start their activities. The overall tone definitely seems to be one of enjoyment.

Teacher's Role

The teacher would announce each Moon day and ask the children to prepare for the broadcast. After this he remained completely apart from anything about the Moonvigil broadcast and it's follow-up activities. The pupils were aware of his passive role and consequently did not approach him for help. After the 40 minute period he would have a 20 minute debriefing session each day. He would just ask the pupils how their day went. They would comment on and discuss their activities and feelings. This was always a "free-form" discussion not a question and answer period. The teacher remained fairly passive during this time also, except to give the floor to the pupils as their hands went up.

Crews

From the daily debriefing sessions the observer understands that the Other Crew were well organized and happy with their group's performance. If there were times when the crew members lost sight of their duties and responsibilities, they would become more conscientious through the comments made during the debriefing (see "involvement"). The Observed Crew were less organized, less willing to help others when their jobs were finished although they always completed their prescribed activities. The crew was very group oriented and rarely collaborated on matters. The Other Crew seem to be dedicated to their group but also to their crew as a whole (i.e. helped each other out, e.g. health reports).

Groups

These were formed most probably on the basis of friendship (group members were seen playing together in the yard at recess). Only one group Blue Group Observed Crew) had members of the same sex only (all boys). Leaders evolved spontaneously in the Observed Crew but were not labelled as such (i.e. not written down as job description). The Other Crew seemed to change jobs daily within their group and consequently there were no official leaders. When the three groups were formed on both sides, no one changed groups permanently or ignored their group constantly. They seemed to be satisfied with their respective group and group members.

Conflict

Only one very major conflict arose and this was the class versus Gary, a rather assertive yet intelligent boy who insisted upon giving his opinion at every spare moment. It seemed that whether he was right or wrong , everyone wanted to contradict him. He wasn't thrown out of his group though nor did he get discouraged with rejections.

Debriefing

Daily debriefing was an excellent idea for this class. They were always very involved in their discussion. Opinions, feelings, problems, were expressed and this gave the children a chance to become more aware and conscientious if they desired. The actual debriefing kept the children interested and provided an opportunity for them to generalize the Moonvigil experience. (i.e. research other institutions as they are now doing).

Observer

The observer felt that her presence did not, in any way, affect the pupils' performance. They rarely looked at her and naturally never came to her for anything, be it help, advice or whatever. She was never introduced or made obvious and this helped her effort to be in a passive role a gret deal.

On day 1, this class which had been divided into crews before the broadcast, pupils misunderstood the mission control directive to divide each crew into Blue and Red groups. One crew became Blue group and one crew became Red group. The resulting confusion is commented on by several diary writers. "On the first day on the T.V. they thought that they were one big big group instead of going to make 3 groups and also it wasn't to orgonist to well at the beginning of the program". "They should have told us a bit more of what we were soppose to do". "The Blue group was all mixed up we did not get anything done so we were all fouled up". "The man on T.V. did not tell us how to divide up properly. Nobody understood this diagram of dividing into groups". However, on day 2 the last-quoted writer says "We straitened out the misunderstanding from Moonday 1 and are going strongly".

Each day was started with enthusiasm in this class. Day 1, "I think the space program is very interesting and fun and it makes you more responsible". Day 2 "I think it's very good so far". Day 3 "It is a good program because it makes you think a lot". Day 4 "It went quite smoothly". Day 6 "... the test are doing OK all the groups are doing allright today". Day 7 "Excited from being rescued tomorrow".

They seemed to have little difficulty with their activities and finished them up quickly. This gave rise to several complaints. Day 3 "Some people felt unoticed they don't have to much to do". "But quite a lot of people have to much spare time". Day 4 "Most of us were finished and had nothing to do". "I think we should have more decoding to do". "It was kind of boaring".

The food was generally handled well and without conflict. One crew handed out first 1/2 a stick a day to its members, and called forth this comment on day 7 "It went lousy because people were arguing and I was informed that the other group had 5 space food sticks each. They had 1/2 a day and had a party at the end". No leaders are identified and no acts of leadership mentioned.

Debriefing days were very full and the class was highly involved, "but I think we should have more time". Debriefing day 1 "Debriefing moonday went very well. The opinions were very good". "... and it tells about these reactions". Day 2 "We tryed to compare the days of vigil with the real day". "... responsibility for my group". "in reactions to work as a group". "to help one another to think about living". "Today we reviewed what we did on the moon and compared them with real life experiences".

One girl who wrote a very full and descriptive diary describes Reflection days as follows "Today we talked about needs in our society some were police, fire department schools...We were to divide into 4 groups and do an essay on one of the topics. Our guide-lines for the essay were, we should include, the need of the institution, the structure that has developed for meeting the need and the roles individuals have in the structure". Reflection day 2 "Today we went straight to work with our groups. Several representatives of each group went to a place which would help with the assignment, e.g. transportation: gas station, police, police station. Fire: fire department. Students who went to the gas station got some pamphlets on cars. The students who went to the Fire department get a taped interview".

On the last page of his diary, one writer says "I would say that we have completed our mission".

Teacher

This is the teacher of a Grade 6 classroom in the metropolitan Toronto suburbs. Moonvigil was played in the regular classroom, which he felt was fairly suitable for the purpose. The classroom was set up with two rows of desks pushed together down the centre of the classroom to act as a barrier, and one row of desks on either side of it. There was one television set at the front of the room.

This teacher heard of Moonvigil from his principal, and although he has never participated in a simulation game or conducted one in his classroom, he decided to use it because "I thought it would be a new experience for the students". He describes his teaching style as moderately progressive, and uses T.V. in the classroom on the average of five or more times a month.

He attended an OECA workshop which he felt provided him with a fair degree of confidence and competence for using Moonvigil. He felt that the most helpful feature of the workshop was seeing a few sessions of Moonvigil and having some idea of what would happen in the first few days.

He spent up to four hours in pre-involvement activities with the class. These included class discussion, role playing, gathering materials and making materials, and he felt the class was poorly involved except for the making of materials when they were fairly well involved.

After having played the game, he felt that he should have allowed a little more time for setting up the area for Moonvigil and getting the room into shape.

The teachers' guide provided him with a fairly high degree of confidence, and he felt competent to use the game. His opinion of the Emergency Procedures Kit and materials is that it is "very complete and adequate".

The interest of the class remained about the same during the week, and more than half of the children carried out their duties. The high academic achievers and highly motivated students were very involved in the game, average achievers and those of average motivation were well involved, and the low achievers and poorly motivated students were not as well involved.

Day one of Moonvigil was close to being a failure because the two crews were confused and did not follow instructions properly. Day two was quite successful because the two crews figured out their error and began to carry out orders properly. Day 3 was moderately successful because some pupils did not have enough to do. Day 4 was good, but Day 5 was almost a failure, because the groups were going on a trip and were excited. "They seemed to take isolation lightly and some tended to act foolishly". He felt that debriefing was very successful because "the two crews related very well about their experiences and were able to draw some very good conclusions". Reflection was also successful because "the research appears to be well done. They are interested and putting forth a good effort".

The pupils only asked him one or two questions on each day. He hardly ever found it necessary to assist the pupils, and found no specific need to modify the game. The role of observer was moderately easy during the first seven days.

The teacher felt that his pupils were well involved during debriefing days. As debriefing officer he was almost always able to limit the role to seeking information and enabling pupils to evaluate their experience.

During reflection days the class talked about the idea of institution, need, structure, etc. They split up into four groups doing research in various areas (police, fire department and transportation).

His personal expectation for the pupils during Moonvigil was that they became "more independent and organized". He would consider using Moonvigil again for another class and would recommend it to other teachers. He would use other television programs which provided a direct complement to classroom activities, and would be particularly interested in science programs which included experiments.

TAMARACK ELEMENTARY SCHOOL

Observer

Attentiveness to broadcasts varied considerably from day to day. During the early part of Moonvigil most children sat in their seats and watched. Many would join in the countdown, and be prepared for the beginning. Attention would be great when specific instructions were being announced, and decline after the instructions. For example on Day 2 they were involved in forming Orange Groups until after the end of the broadcast. Little attention was paid to the news bulletins. And I felt - from the lack of visible or audible reaction- that even when they were watching the screen they were not always attending closely or not comprehending. For example, I noted no reactions to announcements of the crash landing, to sightings of UFO's to the report they might have to face "more than mere survival", to announcement of impending rescue, etc.

During the last few days, especially Day 6 and 7, attentiveness to the broadcast was quite low. Many children did not watch at all - went on with daily activities or talked.

The level of attentiveness of group captains was consistently high. The captain of Red Group a few times called for attention from the others. On a day when attention was very low and noise level very high he stood right in front of the T.V. He was always prepared to take down coded messages.

The degree of involvement I observed was also variable, and also declined with time. I felt a lot of restlessness on Day 6, on Day 7 they were practically out of the game, and on the debriefing days many children did not participate.

The captains appeared to be consistently the most involved people. David and Coleen the two I watched most, were always busy either doing the tasks of their respective groups or telling people what to do or conferring or fighting together. David also became involved in helping anyone in the crew and settling disputes.

The involvement of the group members was never very high (generally) in the daily activities as directed by Moonvigil - the captains appeared to do most of the work in Red and Blue Group. (In Orange Group everyone did some interviewing). However some days (esp. 2,3,4) involvement was pretty high. Jobs were created by the captains, such as weather reporting, checking of machines, checking of moon surface, and scientific research in books. For all of these jobs, the children assigned would make written or oral reports to the group captain. To check the weather and the moon they would put on their jackets and go out to the school yard for a few minutes. Another sign of involvement was role-assumption. There was more evidence of it toward the beginning than toward the end. The first few days the boys of Red Group worked on the machines, went out to look at the Space

Ship, gave detailed descriptions of the moon.

There was also a lot of involvement in the activities of Blue Group. The captain took charge of food counting and distribution. She fought against going into isolation on Day 5 because no one else could handle the food ("What happens if you serve the food and have to go into isolation?) ".Everyone was ready to get their daily food unit each day, and sometimes wanted more. Frequent conflicts over food - complaints of not receiving for example. Talk about the food-dislike. Reports of people stealing food. The food supply in Blue Group was occasion for one of the highlights of Moonvigil. On Day 7 the remaining food units were given out. Right after the broadcast everyone ran to Blue Group and stood in line. There was orderly distribution for a few minutes and then a free-for-all grab. This incident turned into one of the low points of the game. Nothing more was done that day but fighting, laughing, running and rolling around. Boundary between crews broke down.

Another high point was Day 5. All members of the crew were involved in the crisis in some capacity. Some were hospitalized, others worked at forcing them to go in and stay in the hospital, a few others functioned as medical people, and the rest did some of the regular activities.

Enjoyment was low when the children were confused or idle. Degree of enjoyment - what I can estimate of it - varied from child to child, group to group, and day to day. In general, I believe it started out fairly low though not very, rose in the middle of Moonvigil (3,4,5 days) and then declined going very low down to boredom in the debriefing and reflection days. However one difficulty I found in estimating enjoyment was that there was a lot of horse-play and a lot of knocking one another around starting off from Moonvigil but leaving it behind. This sort of behavior was probably fun, but not exactly enjoyment of Moonvigil. May even be sign of boredom with it.

Particular activities the children appeared to enjoy were: Health and Morale interviews, decoding messages (Red Group), receiving daily food unit, playing the space navigation exercise. They also seemed to enjoy doing the daily outdoor weather reports.

In my observation the most critical roles which developed were the leadership positions "Captains". The captain of each group took responsibility for the main group activities and for assigning jobs to the others. The captain made decisions for the group and took the major responsibility for carrying them out. The captain of the Red Group, David, gradually took on role of general captain of the whole crew. This tendency began right at the start, when he didn't like the segregation by sex of Red and Blue groups. He ordered a few switches to mix the groups. Objection was made by Blue Group captain, but David won out. As the Moon Days passed, David was giving advice to other groups, and getting requests for assistance from people who couldn't get a response from the teacher. He was appealed to judge a food dispute.

In Debriefing Day 3, the question of leadership was discussed. The feeling expressed by several children was that they wouldn't want the problems on them. David and Colleen shared this view. David said he didn't ever want to be captain again yet, when he switched jobs, gave up the leadership to another boy, he only stayed out of it a short time. He became assistant captain and the next day was full captain again.

Four of the six diary writers in this class were "Captains" and they seemed to enjoy this role very much. One writer who was only present for the first five Moondays, had only one reservation. "The space food sticks we eat I don't like them". His enjoyment is closely linked to the fact that he is captain of his group. Day 2 "I like being captain of the Orange group. The group is very good". Day 3 "I like today better than yesterday ... and my group done what I said". Day 4 "The navigation kit was fun because my group at least I think they done very well. They done everything I told them to do".

Pupils

Another captain was not quite sure of herself in her role. Day 1 "It was very difficult at the beginning, but now that I understand how to play Moonvigil I am very interested. I wouldn't mind if my group would cooperate a little better so they would understand better". Day 2 "I have been organizing the group and giving them their bages to put on. I don't understand how to five instructions. How do we code messages. Maybe I will understand after". Day 3 is a low point, "Moonvigil is getting to be very boaring. I wish it would be more interesting". On day 4 things pick up again, and on day 5 "The captain of Blue group and I opened up an office for anyone who had a problem and we are getting a lot of business. We have a messenger from Blue group to help us instead of running back and forth". Day 6 "we are enjoying sixth Moonday. Everybody is cooperating".

The co-founder of the "office" was also a diary writer. She seemed to have great difficulty sustaining her interest throughout Moonvigil. Day 1 "It was kind of dum on the first day but is kind of hard also. It had a bit of fun thow". Day 2 "I think that this is going to be the most interesting day of the year. I thought it was going to be another dum day like yesterday. But it wasn't. I think it is fun because the people lisen to you and it makes you feel like the queen and the rules of all the people in the world". Day 3 "It seems to be getting boring because nothing to do and you get tired of being yeld at all the time or yelling at people". Day 4 "I had lots of fun the hole group was good. I don't know if it is because of the good luck charm I have or it is because the groups got together and decided to be good". Day 5 (office opens for business) "Whow what a day I had today. I can hardly wait because we have more fun than ever". Day 6 "Moonvigil is dum, d-u-m dum all's you do all day is sit there all day doing nothing. Onlest you want to sit there and talk all day you can".

The following two diaries provide a rather startling contrast. One was written by the Red group leader who became crew leader (Observer's summary). He exhibits a more consistent and involved role-playing than any other writer in the Observers' schools. He set the scene with drawings and diagrams of exactly where Lunex 12 is "We are surrounded by huge rocks and a cold crater, " and has his group members bring in daily weather reports, "The mist is still on the ground". "The mist is still very low it is lower than before, if you were to look up at the stars and for weather you would have to climb out of the crater". On day 6 he says "it is very cold outside, winds blowing a little but and the moon somehow seems very frightening." He keeps his group busy, "Most of today our "Red" work on the spacecraft fixing most of the little things like oily gas pipes and gas tanks and Radare". He takes his role as leader very seriously. Day 1 "After we got our orders I sent the people to find out... " Day 2, "the red group gave me their count in all the food. Then after I said give out the food I followed my instructions from Loopie". Day 4 "Then I sent all my crew to do work, the other groups are doing good, but I think our group is best". He is optimistic on day 1 "As I think of it we will survive the mission", and jubilant on day 7 "... was a very good one for the whole crew. When we hear it was the last day the whole crew went wild". The fantasy however continues into debriefing where he is still puzzling over what went wrong with the engines until he is "sent to the medical lab for tests for one or two days".

The other writer is living a fantasy of a different kind. On day 1 he feels that things are going well. On day 2 he has a drawing of "Lunex 13, one of the Great Rocket Ships, " and a drawing of himself, respondent, "It makes me feel like a general when I where a metal (medal i.e. badge). I like to be captain. My ideas are that I'm a captain and this killing plant fungie was destroying my space ship so I save my crew". Then he says "I wish there was only one box of the EP kit and I had it I'd get a couple of kids to do it. We would get along well". He is not chosen "captain" and the lovely fantasy dies and is replaced by anger which is to some extent also clothed in fantasy. Day 2 "I started on A and I'm on B. I got mental kids in my group that always fight. And they want to spoil it. But I don't care, I feel like punching them wright in the face". Day 3 "I don't like this. I hate it, it is stupend. I don't like it because the kids I got in my group are mental. When I do some work they fight. I don't like the code". Day 4 "The kids are mental. I always steal the food because they never give me some. I am going to destroy everything". Day 5 "I stold a badge and got betup (beat up). This thing is stupend and fun". Day 6 "I got my food OK but finger marks were on it". Day 7 "It was bad we were happy it was over".

There are very few remarks about debriefing days "The day was OK and we had good talking". "All we do is talk now and nothing else". "Today we talked about how things were different on the moon". "I liked it very much. I said the most about jobs and all that stuff".

Teacher

This is a grade 6 class in an inner city school in Toronto. A regular classroom was used and the teacher felt it was fairly suitable, although he felt it should be divided physically between the two crews. Two television sets were used, one at each end of the room, and there was an "imaginary division" between crews.

The teacher had heard of Moonvigil through an A-V consultant - M.S.S.B. He has participated as a player in a simulation game, and has conducted a simulation game in the classroom. He considers himself a very progressive teacher and uses television as a teaching tool three or four times a month. He decided to use Moonvigil because "I wanted another opportunity to have the students think creatively for themselves, solve problems (in groups) by the group and realize potential strength of leaders".

He attended an OECA work shop and felt that it provided him with a high degree of confidence and a high degree of competence in using Moonvigil. The most helpful features of the workshop were stimulation through simulation of Moonvigil for teachers, sharing enthusiasm with other teachers, question and answer period, and the competence of OECA representatives .

One to four hours were spent on pre-involvement activities. These included class discussion (pupils well involved), research projects (not too much involvement) and gathering materials (fair involvement).

He felt that the teachers' guide provided him with a high degree of confidence and competence for playing Moonvigil, and describes the EP kit and materials as well designed and adequate.

About half the class carried out their duties as outlined, but interest decreased throughout the week. High academic achievers and highly motivated students were very involved, average achievers and those of average motivation were well involved, and low achievers and those with poor motivation were only partly involved.

In terms of the objectives of the game, he felt that day 1 and day 4 were very successful. Days 2, 3 and five were quite successful although difficulties were encountered. Day six was not quite as successful as the pupils were tiring of the game. Day 7, debriefing and reflection were considered to be almost failures because the children were very tired of the game and apathy and lethargy were setting in.

Six to ten questions were asked of him during each moonvigil day, but he hardly ever had to assist pupils. He felt that most of them assumed roles as crews stranded on the moon.

He found his role as observer quite difficult because "Students expected every question answered (by myself) and each problem solved for them. The idea of solving their own problems was threatening to them".

The pupils were poorly involved in debriefing days and he sometimes had to step out of his role as debriefing officer to impose discipline.

He plans to have four or more reflection days with a small interested group of students. To date some projects have been excellent, studies of police force, power of law enforcement, etc. The teacher felt that on the whole the class had a poor concept of institutions, although they did discuss their effect on individuals. They had difficulty identifying institutions and the teacher had to do this for them.

This teacher would definitely consider using Moonvigil with another class, and would recommend its use to other teachers. He feels it enables students to "1. Think for themselves, 2. Make a group decision, 3. make individual decisions, 4. cooperate on a group level and interact, 5. accept or reject responsibilities freely, 6. identify with a role of their choosing". He also felt that he gained insight into his students in the matter of leaders, what discourages some, what encourages others, and acceptance of responsibilities.

2

MAPLE SENIOR PUBLIC SCHOOL

Observer

The Friday preceding the first broadcast of Moonvigil I observed the pupils in pre-involvement activities. The area, which was part of the learning resources centre, was being built to look like 2 space ships complete with instrument panels. The outside terrain of the moon consisted of many moon rocks, craters, etc. The class of 30 was working in two independent crews. The teacher observed the activities, offered a few suggestions, and was in and out of the area during the following 40 minutes of activities. I found out that these pupils were not all from one class but were chosen from several grade level classes. They did not all know each other's names and were not generally found to be working in a group outside of the Moonvigil activities. The teacher told me that timetables had been adjusted for Moonvigil but later I found out that several students were missing classes and had been warned by these teachers of possible failure if they continued to miss classes or in some cases, be constantly late to class. Regardless of this, interest in the activities on Friday was high.

The eight days of broadcast all began the same way. The T.V. sets were turned on at 9:00 a.m. The pupils entered the area in groups of three or four at approximately 9:20 each day. Some never arrived in time to see the beginning of the broadcast. The students would watch the program that was in progress. When the countdown began attention generally was given to the last few days comments such as "boring", "Not again" etc were overheard.

The E.P. kits were never available before the broadcast. There were never any pre-activities before the program. The teacher generally entered with the kit, placed it on the table. He never adjusted the set or spoke to anyone at all.

Attention during the broadcasts was generally high. During Dr. Parnall's interviews and Warner Troyer's speeches, attention wavered. Loopie's messages were listened to very attentively. When the broadcast was over the pupils turned off the set and began to work. It was at this time that the crews would interact because their kits were very close together. One day there was some material missing from one crew's kit and, it was found in the other crew's materials.

The first three days were days of high interest and involvement on the part of most pupils. Directions were ignored, altered or misunderstood but activity went along and enjoyment was obvious. The teacher was a casual observer. He often left the area and the pupils did not seem to require help or supervision. On the whole only about five questions were asked of the teacher and these were mechanical things like "Can we turn the lights on?"

One boy withdrew emotionally from group commitment on the third day. He sat at the side of the area and busied himself with some form of work. In the end he had one other boy won over to his side. They both sat and observed activities with disdain. When asked to join in, they would say they were the only sane ones around and would not join.

The day that hospitalization occurred marked the end of "normal" activity. "Normal" was a word that came up in the debriefing later, by one of the pupils. Discipline and any group organization fell apart. Pupils did not understand that the people who ate only squares should be hospitalized and tried to put everyone into isolation. Chaos resulted, no policing action could maintain order. Two boys led the others to disorderly behaviour and order was never restored. Memories of this must have lived throughout the remaining days and Orange Group was both angry and ashamed at the way their group could not manage. Interest died at this point. There was a little display of displeasure and a loss of faith in Loopie when he announced the false alarm over the contamination.

During the remaining days interest slowly died. Day 7 was a very good day. Pupils invented their own exercise contest to give away extra food. Day 6 was noteworthy because one boy was caught stealing food and a mock trial ensued. However, activities were generally carried out quickly and there was a lot of clock-watching and many announcements concerning how many minutes to the end of Moon Day.

The teacher continued to take a casual interest. The last three days he took notes. One day he forgot to bring in the E.P. kit. Day 6 the pupils had to watch the broadcast from one T.V. set so there was interaction of the crews. This continued because the barrier remained down for the remaining days.

Throughout the last four days overheard comments about following classes and assignments could be noticed. The pupils seldom talked about the roles as scientists on the moon.

Most highly involved members were the 2 boys in blue group who delivered and calculated food and all members of Orange Group who had daily contact with other members and who were very aware of their assignments which they had well defined right from the beginning. Red group regularly assigned their jobs to other groups.

On most days the teacher would ask me what that particular day was about. I would answer that the rescue would progress today or something equally noncommittal.

When the teacher entered the game on Moon Day eight his attitude was low key. The pupils conducted the word association test and completed it satisfactorily. When completed the teacher called out various words and called upon different pupils to give the responses on their slips. At no time was any master list made on chalkboard or paper. Any common trends were pointed out by the teacher. Pupils answered politely at first and then began to offer more details on feelings and thoughts. The teacher did not respond to these comments but dropped them at point of good discussion .

Debriefing Day 2 took 25 minutes. The log sheets were never called for. The kits were not present in the room. All recall of days activities was done from memory. No notes were made for use in Day 3. Facts were dealt with in detail. Teacher spent 15 minutes establishing position and duties of all actors on the screen. He debriefed only to Day 3 when he was to complete all days. Pupils must leave for class at 10.10. He completed his debriefing day 3 at 9:55. No generalizations about the experience were drawn out. Pupils and teachers constantly refer to "the game". Interest waned. Pupils ask do they have to come back tomorrow. On Debriefing Day 3 - time 20 minutes, the teacher began by asking the question "tell me about how you felt on the remaining days. " He got various answers like "Day 5 everything went crazy". He did not draw out any reasons why. The class interest is low. They answer questions but they are not being listened to by rest of the class. Teacher has not set stage for reasons for debriefing and there is evidence on the faces that confusion is the result. Some comments about how they felt about "the game".

- Everyone should have been more serious, and things would have gone better.
- Everything was fine until the hospital game.
- The atmosphere wasn't good - this didn't seem like the moon.

Teacher did not help pupils to see any of the objectives of Moonvigil experience. Class seemed anxious to get out of this discussion time. No reflective activities mentioned.

I felt that the pupils were ready with responses to goals but were never asked. Teacher said he intended to do very little in reflection as these pupils would not be in a group again.

Pupils

Interest in Moonvigil seems to be high on day 1. "Day 1 will probably be the most exciting of all the days as far as watching the program is concerned". "All the people in our group enjoy the game. We think that distributing food is great fun. We all enjoyed wearing badges". Few difficulties were encountered, although one writer mentions "At the beginning of the show we had problems splitting into groups" and another says "We had some difficulty in figuring out how to use the code. The first day was a little shaky. After getting used to being in a space ship and the facilities things will run much better". On day 1 some Orange group material was taken out and looked at and the crew found it very puzzling. On day 2 "Today the mustery of the Orange group was solved when Mission Control told us to make a third group". Another writer says "Today the Orange and Red groups work very well. There was a bit of confusion in Blue group". A third writer remarks

"Today again we had trouble dividing into groups...I don't think we are given enough time to split into groups...Today was very unorganized every one was confused". Moonday 3 presented no difficulties for some writers "Today things went fairly normal". "All jobs are being worked out including the odd jobs of collecting buttons... the day has been quite successful". Others had some problems, "I thought it was crazey when we had to write down our jobs, nobody knew what they did, we all had to decide first what our job is". "We have had some difficulty in decoding messages". "Lynn can't decode the message, most of our equipment is broken". Most of the writers enjoyed day 4. "I like Moondays now because everyone is getting along better and functioning better. I think that when we know what to do we do it better". However, on day 4 "John did odd jobs he feels unimportant". On day 5 one writer reports that "We have noticed that there is a general drop in health and moral". Another says "We began the day fooling around. The thought of contaminated food made half the crew go insane". Still another "the only thing wrong is that after we've done our duties everybody laxes around. I think we should be able to work on our control panels and finish them". On day 6, two comments, "I wanted to do the exercises because we got extra food. We were fooling around a lot, we were board", and "today when we switched jobs it was Kaos..." On day 7 "We liked today because of the extra food....Today was a fun day. Everybody was happy we were leaving. The people thought Moonvigil was okay. Everybody fooled around".

There were a number of conflicts between the groups. "I am a member of Orange group. The only problem is that when I was doing the physical fitness tests some of the people in Red wouldn't do them and wanted to do test over and were going to change there marks when I put the sheet in the log book". "I get agrivated when Orange group comes to ask questions and tests us every day". Lack of involvement of some people bothered some of the writers. "There is constant fooling around by many members... There is one problem: members are fooling around and there is no immedit supervision to control them". "I think the kids don't get too involved in the game. I thought it was awfully stupid today because Red group sent us a message and they had a different decodes than we did so we could not read the message". "We have one boy I hate he always acts up and tries to lead us where he wants". The mock trial spoken about in the Observer's summary got only one mention in the diaries. "Someone ate an extra food unit and got a penalty".

There is some evidence of role playing in these remarks "The mention of a UFO at the end of the broadcast caused everyone to let a sign of disappointment". "Today we received further shocking reports about some UFO's in our direct area. Everyone is keeping their fingers crossed that the UFO problem wont be serious".

One writer remarks quite rightly, "The communications books should be handed out as soon as we get here even before the T.V. program comes on, because our group must write down the code numbers. We end up writing them twice, once on scrap paper and for reference on our code pads".

Debriefing days are mentioned in only one diary. Day 1, "today was our first debriefing day and was full of surprizes and humour". Day 2, "The whole crew of Lunex 12 spent the whole period talking, reviewing and reliving the whole period of seven days that we were stranded on the moon. It was enjoyable and comical".

PINE ELEMENTARY SCHOOL

Observer

My stay in the classroom was limited to five days, because of the teacher's impatience (or perhaps his principal's) with the particular class I observed. It should perhaps be noted that the teacher's attitude to this class bordered on the apologetic - they were supposed to be of "lower intelligence" than, say, his 7-8 class. None of them struck me, however, as being anything but alert, intelligent, lively, etc. If any generalization could be made about this particular class it would be that they, as individuals, were certainly equal to the game, but as a group they were not capable of really listening to one another or of being patient enough to collectively puzzle through some of the more challenging parts of the game, e.g. the space navigation exercises.

Anyway, that's all, really, I have to say about the class - just wanted to bring it in because of the special circumstance of the teacher's impatience with it, which I'll go into at the end of this summation.* The children did enjoy the game on the whole - the two days out of the five which seemed to me low points were Moon Days 3 and 4. On both days there was more milling around, obvious signs of boredom, dis-interest, etc. The jobs assigned to the groups just were not fully comprehended by those groups - at least in the crew I observed. For instance, in the assigning of jobs for the job list, my crew got no further, apparently, than to designate who was "Capt." and who "Asst. Capt ." One group (Orange) did not even get that far. Also, the space navigation exercise was a bust. No one in the crew, apparently, understood it. Needless to say, when their understanding was thus baffled, they reacted by forgetting about it - turning to the space navigation exercise sporadically, trying to get through it, and then turning away and doing something like hanging a picture on the wall, or writing their names on the board.

The other major problem seemed to be Orange group's failure to do Health and Morale Interviews for the whole crew. Their failure to do so resulted in a considerable loss of cohesion and purposefulness for the crew as a whole - "nothing to do", etc. Also, it might have helped role playing a bit more.

Moon Day five was fun, though. The whole thing about hospitalization really grabbed them, in a way - no problem in establishing the fact that some are "contaminated" and ought not to roam outside the isolation hospital. (They also grasped the idea that the basis of contamination was the eating of "squares" - thought this was, as I think I noted, not rigidly applied - unless Red group was meant to have only one member after everybody who was supposed to be hospitalized was hospitalized - I also overheard the girl in Orange Group who undertook the responsibility of hospitalizing the contaminated crew members ask the girl who was the first person to be hospitalized who she wanted in there with her). The whole process of "hospitalization" was obviously a very dramatic and highly visible illustration of group dynamics, something which had no trouble in getting a response from the children - a dramatic situation which appealed to something primary in their imaginations and/or psyches. In comparison to that, making up job lists or doing space navigation exercises was confusing and abstract.

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* Editor's note: Although observers were asked in their overall summation to "try to avoid judgements and opinions" it is obvious in reading these summaries that in several places they did not; this particular case being an outstanding example. The observer was aware that he was expressing an opinion in making this statement and communicated to us that although he had refrained from such expression in his daily reports, he felt compelled to do so at this point.

The other thing which seemed to keep them attentive and involved - at least with regard to the Orange group members, who as I said were the only ones in this crew, unfortunately, to experience it, was the M & M interviews - things like the stand on one foot, put your fingers on your nose with your eyes closed routines. I suspect exercises of these interviews should be slightly difficult and perhaps slightly bizarre (without, of course, being stupid).

Unfortunately, no appealing stories, anecdotes, etc. from this 5 day experiment. The teacher got uptight and ended it - his reason being that he could not "justify" it, though he was willing to admit the children were getting "something" from it - and enjoying it. He told me more than half (to two-third) were even willing to do the moonvigil program on their own time, at lunch hour. I suspect heat may have been applied from the principal (a no-nonsense, we run a tight ship here, type) - teacher remarked he (principal) was a "traditionalist" who hadn't been overwhelmingly pleased when he dropped in on the afternoon session with the 7-8 class. Also one of the teachers I heard complaining about the noise she and her kids had to endure every morning when the class above her (ours) re-arranged their desks at 9:30 in preparation for moonvigil. She may have complained to my teacher, or the principal. The teacher suggested that he should have gone over instructions with his class before the program began, to make sure the blighters understood - poor fellows, it's not their fault they're stupid. He also suggested that for brighter kids (i.e. his 7 - 8 class) there should have been more to do - they got bored too easily. (This suggestion could also have been applied to the class I observed, actually).

Still, all in all, I never felt the crew I observed was in danger of "getting out of hand" even though temptation (in the form of baffling instructions, times when there seemed nothing, really, to do) was obviously present. The kids maintained the sense not only of their being in a space ship, but of their belonging to the different groups. (The only major instance of dramatic improvisation, however, was Blue Group's lining up in chairs near the end of the moon day, and leaning back in preparation for blast off - counting off the seconds out loud to "blast off"). They were not a class, obviously, that was used to feeling it was together, or that it was particularly well thought of - but when the teacher did stop the game it is perhaps significant that he did not refer to anything concrete or unarguably bad about either the behavior of the class or the set up of the game, but rather to the vague rationale of "I just can't justify it"

Pupils

One diary writer in this class was particularly concerned with problems of presentation of Moonvigil. She starts her diary on day 3 by saying "Please talk a little slower in your programs . On day 4, she says "I am enjoying Moonvigil and also I am having no problems". However, she goes on "I think that when you are giving the instructions, you could talk a little bit slower and show the instructions on TV for about two minutes (that is, for each group) because not too many people remember for the time of operation Moonvigil". On day 5 "you should talk in a manner that is self-explaining because not everyone knew what to do before Moonday 3. Not too many people understood what you meant in the kit". She has some ideas about leadership "One person could be in charge and the other one could assist. These people could assign the jobs and also change the jobs, therefore everyone should get to do their fair share of jobs. The job may not be very important, but then they can't complain about having nothing to do". She also feels that teacher interference would be a worthwhile modification. (You) "should tell the teacher to make sure that everyone understands and maybe teachers could ask pupils a few questions concerning operation Moonvigil. The teacher may be able to find out where a pupil doesn't understand adequately. Then the teacher could explain". The other diary writers agreed that Moonvigil was "great", "it made you feel like you were on the moon", "it made you have a real responsibility of the crew of Lunex 12". Three of these managed to sustain their enthusiasm for the five days until the game was concluded. Two others who started out with great enthusiasm were somewhat slowed down by confusion over instructions, and both of these writers were finally in despair because their group mates would not take the game seriously. One said on day 5 "I think that our room is not responsible enough to do something like Moonvigil cause some of us think it's a game, some take it serious, some don't do it at all". The other, also on day 5 said "This whole program is not the way I thought it would be because I don't think anybody really thinks this is serious. Everybody is treating this like a game. It is not a game. It is something to be taken serious. The kits are falling apart because nobody is taking care of them, and I think we better smarten up! and fast! " Too late, the game ended that day. There is only one description of jobs on day 3. "We elected David as captain and Doug and Nick as assistant captains. Gary and Keith as mecanicks, and I am decoder boy. Well, we fought about the jobs, but we finally got it straight". On day 3 one group was unable to decode their message, and on day 1, Blue group was "mixed up" and did not give food to the other groups.

OAK ELEMENTARY SCHOOL

Observer

Observing for "Operation Moonvigil" was a worthwhile experience for me because of the students (Grade 6) and the teacher. This teacher was inspired with the whole idea of Moonvigil and she tried so hard, every day, to be as fair and generous as she could, both to the people who created Moonvigil, and also to her students. By this I mean that she followed the teacher's guide almost to the letter - Scenario, wearing Debriefing Badge, being an observer only, etc. She never pressured the pupils into anything; when they asked questions she referred them to their manual; when they were hopelessly lost, she walked over and comforted them, telling them how difficult she found it sometimes, and that if they quieted down and relaxed and worked together, everything would be alright. She had a soothing, warm manner which just seemed to radiate outwards to the pupils, creating in them the urge to try again and to be better at it. During the debriefing days often she would remind her pupils to think harder, to try and remember lost details "Come on people - think. It's important that you remember".

One device that was particularly effective in prodding the kids to respond during Debriefing Days was the phrase "Well as far as I see it, the game went like this....," whereupon a number of pupils corrected or added details to her summation.

My class was a strong, sturdy, robust one - kids physically active. The talk of going to the gym was present nearly daily at some time or other during the course of the activities. Naturally then they enjoyed Orange group's exercises. So many kids did pushups and balance exercises and jogging on the spot. Near the end of the Moon Days, Orange group exercises threatened to be the sole activity of the "Moon Day".

On Moon Day 1, the pupils although attentive to the TV, did not immediately split into groups. It seemed as if they figured they were going to be passive spectators and just watch a TV program throughout the whole two weeks. Only upon the teacher's remark "Weren't you supposed to do something? " did they move. And quickly they did. The first day was indicative of the level of attentiveness throughout all the TV broadcasts. I.E. HIGH.

My crew had very little difficulty in understanding instructions. The stricter points were the decoding procedures, space navigation exercise and job transference, this is to be expected, as they were novel and demanded some group interaction - something which adults sometimes find hard to achieve.

However, the difficulties posed, were not so difficult, as to disrupt or hamper the rest of the day's activities.

The hospital scene was quite a hit with the pupils. Everyone was involved - I mean the entire crew.

Role Playing was not a strong part of the game. No one pretended very much; no one dressed up or wanted to be called spaceman, etc. My crew was not creative either when they had spare time on their hands. The activities that they did persue were not related to Moonvigil in any way (e.g. homework, wrestling).

The pupils enjoyed as I mentioned, the TV broadcast. Upon its termination, the children showed no reluctance at all to getting involved with the days' instructions. They immediately rushed to their EP kits and were away. The trouble started about half way through the day when their duties were understood and completed. Then they became bored and restless. A few children, (usually only one in each group) emerged as leaders; when they found the others unreceptive to their wishes to get back to the game, they busied themselves with rereading the instructions and writing things down on paper.

The low point of the Moon Days was Day 6, for on this day, the kids were not too enthusiastic to change jobs. Consequently when they did not change, they were not left with much else to do. The day saw Moonvigil end about fifteen minutes into the day, and the rest of the time was spent in rambunctious, noisy, activity.

During Debriefing Days, the pupils were not interested at all. The fun of interviewing was soon forgotten about when the teacher assumed the traditional authoritarian position at the head of the classroom. On each day, it was a struggle, a real tug of war, for the teacher to draw responses from the kids. The process was slow and tension ridden - not a very enthusiastic or unanimously eager class.

However, the picture did change suddenly on Debriefing Day 3. The pupils had had three days (a weekend and Monday) off from Moonvigil and the teacher remarked that it was going to be impossible to get the kids interested in Moonvigil again. However the class'actions surprised her, as they did me, on this day.

The teacher on Debriefing Day 3 told the kids honestly that what they did today as a group, would determine the course of activities soon to come. With that opening remark, the teacher proceeded to be faced with a constant array of raised hands. Five or six were ready to offer something on each question. The talk was not aimed to generalizations; instead questions were asked rapidly concerning How? What? Where? When? Why? Some responses were expanded upon, but never presented to the class as an important conclusion or valuable lesson.

The teacher felt that the pupils understood the need, structure, role concepts, but were unable to label them as such this day, because of her lousy approach. She confessed she was totally unprepared for the day's activities. However, she felt confident that during the reflection days, much learning about institution groups would take place.

Pupils

There were extensive pre-involvement activities in this class and one writer says "Our classroom looks just like a real space rocket. We had everything you can think of". The children approached Moonvigil enthusiastically, and for the most part their enthusiasm was well-sustained throughout Moondays. There was some difficulty following instructions particularly in the first few days. "The first day was kind of confusing. At first I felt lost. We followed our instructions even though we didn't know what we were doing". "The Red group sent us a code which we couldn't understand so we tried our best but it was impossible (mainly because they had a different chart)". One writer says "I do wish the instructions in the EP manual were in more detail". On day 3 "everybody argued over what to do" but a pattern of leadership is emerging. In one group "I am like the captain of the Red group. I guess I do the most in our group, like I do the codes and write all these notes and stuff but I like these things". In another group "in our group we take turns being leader". One other writer remarks "I think Moonvigil is doing something for some of the kids involved. It's giving them a sence of leadership". On day 4 most of the groups found the navigation game "fun and easy to do", but one writer complains on this day that "People talk and you can hardly hear anything, and that means you can't hear your instructions". Day 5 presented some difficulties, "We got mixed up on who gives and who receives the coded messages". Also "...had to find out which sticks were contaminated and which weren't because the Red group ruined all the code cards and now we have to find out the code ourselves". One writer is unhappy on day 5 because, "You see I am in charge of this diary and that's all I am supposed to do. I feel that since I am in charge of the diary I shouldn't be left out and that I should have a job during the game". Changing jobs in day 6 presented a difficulty to only one writer. "Today this boy in our group that is so bossy he tells us to do a job when your doing a job. Like when I doing this he tells me to do some other job". On day 7, one writer felt that "Moonvigil is really helping some people to form a sense of responsibility". Two writers were sad "I feel really bad that I'm going back to earth", and "I wish it wasn't the last day of Moonvigil". Another says "this is our last day at Moonvigil control and I think it was a successful 7 days".

Reaction to debriefing days is unenthusiastic. "We interviewed other crew members and got rather dumb answers". Day 2 "I think going over what we did all the other days is a good idea", also "When we read out of the log book some did not make sence. And that was not very good", and "I thought today was kind of boaring because all we did was talked about what we did before". Several writers express the wish that they were still on the moon, which was much more fun.

SILVER BIRCH ELEMENTARY SCHOOL

Observer

I feel that in giving an overall summary of what I observed, I shall first comment on the preinvolvement activities which I perceived. They ranged from moon posters and cardboard control consoles all the way to the educational kit put out by the New York Times about the real Moon missions (these included film strips, pictures, slides, tapes, etc).

Having first been exposed to these preinvolvement activities, they were then in some sort of mood receptive to Moonvigil.

In commenting, I shall first begin with some remarks on their response during the three obvious divisions of each Moon Day, i.e. Preparatory Activity, the Broadcast, Task-Completion. It seems to me that the students' interest and involvement were the greatest during the period of Task-Completion, then during the Broadcast, and finally during the Preparatory Activity if taken overall. It usually took them some time to get involved with the Preparatory activity which resulted in the incompletion. The Broadcast usually got what was almost their complete attention.

We shall now turn our attention to a discussion of Groups and the emergence of leaders. In my observation, it appeared that on the whole the pupils had little or no difficulty forming into the three groups. In one Blue Group, we got a total male composition whereas in the other we got a total female composition. The same goes for Red group. Orange group on the other hand was mixed quite evenly in both crews. Furthermore, in each group, there seemed to emerge a dominant personality or leader who no matter what job he/she did really dominated the direction of the activities. Even when it came to the changing of jobs, these same people had pretty well the say as to how and when things would be undertaken.

Now that we are on the topic of job changing it is interesting to note that jobs were changed within Groups rather than between Groups. Each person in any particular Group knew pretty well what everyone did and thus it was relatively facile to change jobs.

Then, too, since there really were not enough jobs, the available jobs were divided into their different steps and these steps were assigned to different people. For example, there was a person to take down the coded message, one to read the message, one to punch the holes and one to decode the message.

Now, if we turn our attention to the Hospital situation, we find that the blame was put on the person responsible for the distribution of food sticks. The initial reaction was one of wanting to spread the contamination to other members of the crew. However, they volunteered themselves to the hospital with little hesitation. The hospital itself was made up of two tables on either side with a cart on which was a chair with a guard sitting in it. The children seemed to enjoy being in the hospital, there was laughter as well as silly questions such as what does one do when one has to go to the bathroom and one is contaminated.

Upon turning our attention to whether they saw themselves as a crew stranded on the moon, this is rather debatable. I make this statement because they had no notion of spaceship territory; I was allowed to walk across, between, etc. their spaceship without any interference. However, maybe, this is because they regarded me as a person with the authority to do so. On the other hand, they did tell the teacher that he did not exist whenever he told them to keep the noise down.

In connection with the teacher and his role, it is interesting to note his behavior. For the first two or three days, he was very, very frustrated until he got to the point where he started screaming at the kids and slammed his binder on the desk in front of me as he said:"You know this is the most frustrating thing that I have ever had to do. I just cannot sit back and watch these kids who I know have the intelligence, make the mistakes which they are continually making. I feel like intervening". After consultation, I told him that rather than frustrate himself, he could intervene if he felt it necessary, as long as he did not play the game for the kids. Well, he was very happy in this role and whenever he perceived an obvious misunderstanding on their part he would tell them to reread the instructions or he would explain them himself. The kids took very well to this and seemed to be enjoying the whole experience a great deal more now that they comprehended what they were expected to do.

Next, we shall look at evidence that they really did enjoy Moonvigil. Well, among other things they almost shook the room during their crew Health Exercises. As well, they were constantly smiling and were constantly wrapped up in what they were doing. For example, when a girl from Orange group wanted to conduct a Health interview with a boy in Blue group, he responded negatively with the words, "Not now, don't bother me. I'm busy with the food sticks distribution".

Finally, we shall concentrate our attention on the Debriefing Days during which I could only attend two out of the three. During these two days, the teacher followed the outline pretty well as it was set down in the manual. The children conducted their two interviews after which there followed a discussion of the responses. Thus, they found certain answers or word associations were common, whereas others were not; these they discussed in more depth. Having done what the manual asked, the teacher decided to undertake a little of his own Debriefing. He began by asking them "How did you feel about Moonvigil, honestly?" Their responses were - really good, exciting, a little stupid, e.g. food contamination, only a game because, e.g. Loopie. One girl disagreed and said that if you use your imagination it is not stupid and it can be much more than a game.

In response to his question "How many people felt as part of a crew really stranded on the moon?" He got 12 - Yes; 8 - No, only a game.

Finally, we came to his most interesting question: "What do you think Moonvigil's purpose was?" He got a variety of answers to this and one of them hit the nail right on the head. One boy responded "to show us how a large corporation works". Among the other answers we have the following:

- to show us the future
- to show us how to develop ourselves
- to show us how to work by ourselves
- to see how kids react to different situations in terms of imagination
- to see how groups get along with each other
- to learn how to work together
- to see how you react in emergencies.

Finally, I would like to add two comments. First of all, it was difficult to distinguish the red and the orange buttons. Secondly, it was hard to hear what the students were saying at times.

Pupils

All of the diary writers in this class were most enthusiastic about Moonvigil. Two had preliminary reservations but they quickly disappeared. "When the teacher told us about it I wasn't so thrilled because I thought it was boaring but later I started to enjoy it". "When we first started Moonvigil I never wanted to be in it and I always wished we never get picked. Now I'm glad we did get picked". On day 1 there are two references to difficulties. "Although our team couldn't understand the orders at first, we finally succeeded in carrying out our orders". "There is one thing I know that we are not doing right is the code, we really don't understand it". But, "The second day is easier, we finally found out the code". Although there seemed to be no formal recognition of leaders, one writer says on day 1, "... the people in our Blue group sort of put me in charge to write down the things about food and everything". On day 2 enthusiasm continues, "It is getting more exciting every day". "We all like this game, there is lots of activities you can do and you get to eat three space food sticks a day. I think that's the best best part". There are difficulties however, and one writer says "I wish that the teacher would be able to help you a little..." Also, "We had to do the A,B,C on our cards. I did not understand it", and "... but sometimes it is getting hard and I wish it wasn't". There was one other difficulty on day 2. "Today we had a little sad news from our teacher. He told me that me and my friend have to choose which one has to stop writing the diary. It was very sad but we cleared it up. My teacher said that we could both stay in because he will make an extra folder. My friend and I (who is in the same crew) we both went into the Orange group". On day 3, two of the writers are happy. "I think you make a great game," and "Everything is more organized today" , while a third complains that "Todays broadcast was boaring, it wasn't as interesting because we had hardly any work to do," On day 4 is the first real drop in enthusiasm, although one writer reports, "It's been going good these days", others say, "I think this was the worst day of all. Nobody really knew what to do". "I didn't understand much about these maps..." "We do have some trouble with the instructions given from mission control. Everything seems to be mixed up when everybody is noisy and they don't know what to do and they first go around doing things wrong". "We had a lot of problems because it was to noise and nobody wanted to do what we had to do. We didn't have enough time to finish". On day 5, things pick up again. "Dear Diary, Have I got something to tell you! " This girl found herself to be the only one in her group not hospitalized and says "...but it's lonely being the only girl working". Also on day 5 "It's really fun wondering what's going to happen next," and "Today we had a very exciting day. It was so fun". There are no recorded conflicts about hospitalization, everyone seemed to accept it. On day 6 there seems to be some unhappiness about changing jobs "...nobody seems to be happy with their work". "Today was simply boring, I hate changing jobs". One diary writer begged the question, "Everybody in our group switched jobs except me because I'm sort of the leader". Some concern about food is also seen on day 6 "...today we had a mix-up, Orange groups book said to give out one extra food stick to everyone, but there wasn't enough so we couldn't do it", and "...we were supposed to get two food sticks. But we don't have enough so we only got one each". On day 7, one writer remarks "I don't know what happened to the food units. But I pity the person who did it. He must be sick!" On day 7 also, several writers were excited about leaving the moon. "It was our last day, everybody was happy", and "today was great. We celebrated our last day on the moon....I'm going to miss the moon". Debriefing days were enjoyed by all the writers, they found them exciting and stimulating, only one writer complained that "Everything was getting out of hand and everyone was trying to talk at the same time". The success of the teacher's debriefing can be gauged by these comments on Reflection days. "Today we talked about institutions and what our society needs to survive. It's good for getting kids to know how big companies are run and how to organize themselves". "Today we have an institution discustion about our ways of lives, and see what we need for the country. We need food, shelter, money, transportation and all kinds of things". "The thing I think that helped me the most to understand how an organization works. Just briefly, but just enough". And finally, "Moonvigil was like Real Wow".

There is no suggestion that reflection activities are planned for this class.

WILLOW ELEMENTARY SCHOOL

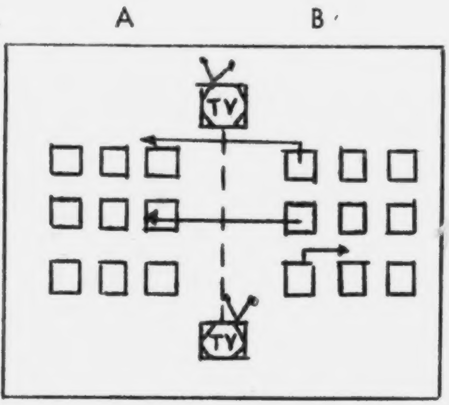
When I arrived at the Grade 8 classroom on Moonday one of Operation Moonvigil, the teacher had divided the conventional classroom into two groups of pupils. One group sat facing the front of the class where a TV monitor was set up; the other group faced the opposite way where another TV monitor was set up in the back of the room.

Visual reception was not of the same quality in both sets. One had a "fuzzy" picture and therefore was not clear at all. Both however had adequate audio-reception. Because of the poor reception in the one set, the pupils would continually twist to watch the better set, others moved from their position, to a better observation post. Thus, the day began with a movement pattern, which, although minimal in its initial stage, was to become a paramount factor in the ensuing days.

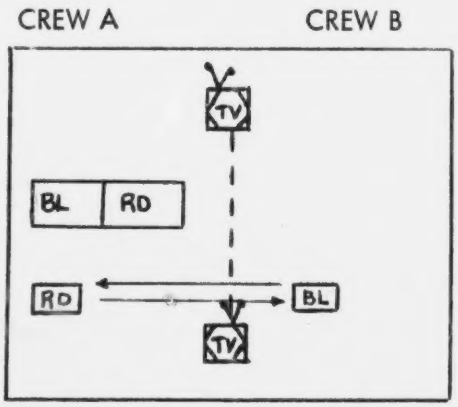
When the command was given by Mission Control to divide into two groups, on Day One, the class, already instilled with notions of unrestrained movement, crossed supposed spaceship limits and formed four albeit nebulous, "groupings". The diagrams below graphically illustrate the intial seating structure and its resultant transformation after the Day One 'division' command was given. Arrows (⇄) denote continuous movement.

COMMAND GIVEN ⟶ RESULT OF DAY 1 COMMAND

1.



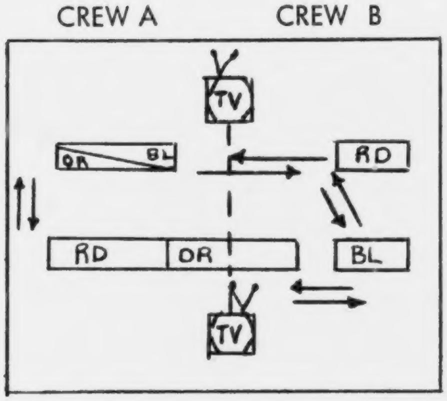
2.



As a result then of Day One movement, the crew which I had chosen to observe previous to the broadcast, was left with Blue group only. At times this group fluctuated in composition of from three to eight members. (There are therefore instances where my crew and group observations in the Daily Reports were synonymous).

On Day Two the command was given to form Orange group. The diagram below illustrates the approximate resultant seating of the groups. The arrows (⇄) again denote continuous movement interrelation.

3.



Results of Orange Command

I made a decision on Day 3 (and it may eventually, I thought at the time, be considered an improper one) to observe the interaction of the "unofficial" crew at the back of the class. Referring to diagram 3 above, it can be seen that this crew consists of (from left to right) a Red group, with members from the original teacher-division and members of the opposite spaceship. Attached to this group, and acting as a buffer zone directly astride the two spaceships, is the Orange group (subject of most of my observations). Caveat! This "unofficial" crew straddling as it does the two Lunex 12s does not constitute a "unit" per se. The pupils, as noted in the daily reports, continually intermingled with classmates in all parts of the class.

On Moonday 6 I observed the other "unofficial" crew. This crew consisted of a Blue and Orange group (both in the original teacher-division area (A) + (plus) a Red group from the opposite teacher-division area (B).

The first three broadcasts of Operation Moonvigil - disseminated an aura of confusion among the pupils which was perpetuated by their teacher. This perpetuation took the form of a teacher-introduced game modification. I did not fully discover nor comprehend the modification until Day 6. On Day 4 I noted in my Daily Report that a boy pupil, a co-leader in Blue group, came over to tell me that he had only two foodsticks left in his EP kit. I attributed this result at the time to the visible confusion in the mishandling of the food distribution procedure. I was only partially correct. For, on Day 5 I found a card which instructed the pupils not to open the food supply on the other side of the Kit until they had finished one side. They were also told on the card, the number of each kind of foodstick. I speculated on Day 5 that the teacher had done this because he was sharing all his Moonvigil materials with another colleague who had also decided to let his class participate in Operation Moonvigil. At the end of Day 5, while the pupils were out to recess, I found out that the modification introduced by the teacher extended beyond the mere insertion of an instruction card in the food supply. The teacher at this time brought in a green garbage bag filled with candies. He then filled the now empty EP Kits with his own "food supply".

The teacher also added to the confusion-laden situation by limiting the follow-up activity period to 20 minutes from a previously announced 30 minutes on Day One. The teacher told the pupils he wanted them ready and at their desks at the 20 minute mark. As Operation Moonvigil progressed, I noted that, not unexpectedly, the pupils began their clean-up and readiness process at increasingly earlier moments before the 20 minute mark.

All of the above-mentioned data are illustrative of the atmosphere which induced a low response-level in attentiveness and involvement throughout the whole course of the Operation. The pupils observed did not follow almost all of the procedures integrated in the simulation game. They did not perform the Space Navigation game for example, nor were the pupils unduly concerned with the job procedures of the Operation. Most did perform and visibly enjoyed performing the daily exercises routine.

It is my humble personal opinion that the game achieved nothing or very little of its purported aim of instilling institution - awareness in this specific class. Indeed, whenl last reported from the school, the teacher had stretched Debriefing Day One into its third day, and did not seem, to me at least, to be anywhere near even the periphery of any institution concept.

Addendum: After the activities had finished on my last day at the school, I asked the teacher for permission to very briefly talk to three students. I spoke to two girls and one boy, all 13 years of age. They were chosen, for a particular reason. One girl, I had observed - and noted in the Daily Reports as being "disinterested", and had been absent during two days of Moonvigil. The boy pupil and the other girl were "Co-leaders" and specifically described in Day two's Daily Report. I was interested in the latter two because they were the more aggressive and outspoken during the daily activities. I talked to each individually and separately. I asked each to give me one word (any word) to describe the experience they had gone through. The boy and girl, co-leaders both, without each other's knowledge, said "confusion". The disinterested girl said "weird". I asked them then if they knew or had any idea of what the experience was about: the boy pupil said he had no idea, and, interestingly so did the girl co-leader. The "disinterested" girl said "a trip to the moon". I also asked each of them again individually and separately, whether they enjoyed themselves. If the answer was yes, I asked them whether it was because of the things they had to do in Operation Moonvigil or because Moonvigil let them do whatever they wanted for 20 minutes. All answered they enjoyed themselves. The boy pupil said he enjoyed himself for both what he did in Operation Moonvigil and for the freedom to do anything in the 20 minutes. Both girls said they enjoyed themselves because of the freedom to do whatever they wanted.

Pupils

Some, but not all of the confusion described by the observer for this class is reflected in their diaries. One diary writer was disenchanted from the start. His entries consisted of one terse statement per day, expressing sarcasm, "I feel we accomplished a lot on day 1, we landed on the moon"; annoyance, "We checked members of the crew for health, I feel it is a lousy game"; boredom, "after you have finished checking it is very boring"; and one brief moment of indignation on day 4, "Somebody robbed our food" After day 4 all the daily comments are confined to food. For example, day 7, "We ran out of food". Another diary writer started out with an expression of concern that,"There are some people who act up while playing this game". He made a good attempt to become involved in activities, but by day six confessed that "Blue group doesn't have any activities after giving out food, so we don't do anything". A third writer, a girl, liked everything, "I think Moonvigil is fun", on everyday, and appeared to have no idea what was happening. Only one writer appeared to be truly involved in the game. She says "at first I wasn't sure I would like it or not because I wasn't sure what to do. But now that I know what to do and I know how to handle this programI have been enjoying it". Her diary gives full and accurate descriptions of all the activities, including, surprisingly, the navigation game (see observer's summary). She also was well into her role, expressing concern for the health and strength of her group "We all landed safely. Everyone was healthy and in good condition". Of the remaining two diary writers, one gives a factual account of what happened every day without expression of enjoyment or other emotion. This diary was probably not written up daily, since she has some of the activities happening the day before they actually did. The last writer was also an "enjoyer". Everything that happened she thought was "great". "A real fun thing". But she added copious notes on how to improve the whole operation and make it more interesting. "Maybe you should have formed Orange group the same time you made Blue and Red group". "Also when many people are stuck on a spacecraft wouldn't it get tiresome. You should plan entertainment for the crew of Lunex 12 in the resque kit". "Why not for additional fun let the Lunex 12 land on a unrecorded planet, on the planet we can build raidar...we can search around. Maybe discover a strange tower, etc". This writer was not in fact involved in the game as it is, preferring to make up one of her own.

There were two debriefing days. For day one there were several descriptions of the interview technique, and one writer says "When we discussed the answers we found out many people had opposit views to each of the topics". Debriefing day two seems to have been a general discussion of problems. "The Blue group had problems giving out the food. Red group was decoding messages when they shouldn't have. Orange group said they didn't have enough time to do the exercises and the game". The only other comments on this day are about food. "In Blue group they ate more food". "One question was why we didn't have enough food". "We talk about the shortage of food".

There is no identification of leaders, and no acts of leadership are described in these diaries. Aside from the one child who complained about others "acting up" there are no conflicts described.

The major modification introduced by this teacher, that of sharing the EP kits between two classes, plus his completely passive attitude towards the game (aside from cutting follow-up time), combined to make this a baffling and unsuccessful experience for the children.

ANALYSIS OF THE TEACHER QUESTIONNAIRES

Response Rate

The Teacher Questionnaire response rate was 46%. According to Kerlinger*, the mail questionnaire should be used in conjunction with other techniques, and of the two major reasons given in his text, lack of response is one. The figure of 46%, or 111 (out of 239) questionnaire returns, he considers very reasonable and in fact other authors cite this as high.**

The second major reason given is inability to check responses with the respondents. This was one reason why the observer group teachers were also sent a questionnaire. Unfortunately, only four of the thirteen teachers returned their questionnaire but even from these four the discrepancy between what the observers reported and the teacher's report are illustrative of the weakness of depending only upon mail questionnaire data. For example, the teacher's failure in Doum Elementary School to report a major modification of the game through the introduction of a "dead" rule.

In this section, the 80 questionnaires received from non-observer schools by December 10th., 1971 (one week's period of grace was given) served as the basis of analysis. An additional twenty-five have trickled in since that time.

The items in the Teacher Questionnaire were grouped, for the purposes of analysis, into ten sections. As in the overview of the observers' schools, we begin with the background and setting, followed by the opinions and information regarding the workshop, the materials, preinvolvement, the Moondays, debriefing and reflection, pupil involvement, teacher's role, future uses of Moonvigil and finally the relation of amount of time spent in preinvolvement activity and the success of the game.

Background And Setting

Operation Moonvigil was played for the most part in Grades 5 - 8. The distribution over grade levels is shown in Table 71. It is interesting to note that one-quarter of the respondents taught classes of mixed grade levels.

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*Kerlinger, F.N., Foundations of Behavioural Research. Holt, Rinehart and Winston, Inc., New York, 1966.

**Green, P.E. and Tull, D.S., Research for Marketing Decisions. Prentice-Hall, Englewood, N.J., 1966.

TABLE 71

GRADE LEVEL

Grade Level	Number	Percent
5	10	12.5
6	18	22.5
7	12	15.0
8	16	20.0
9	3	3.8
10	1	1.3
5.6	9	11.3
6.7	3	3.8
7.8	8	10.0
	80	

TABLE 72

LOCATION OF SCHOOLS

	City	Town	Rural	
Number	57	15	8	80
Percent	71	19	10	

Seventy-one percent of the teachers teach in cities, while 19 and 10 percent teach in towns or rural areas, respectively. This distribution is reasonable when one considers the population distribution within the province.

TABLE 73

TEACHING STYLE

Teaching Style	Number	Percent
Very progressive	7	8.8
Moderately progressive	46	57.5
Moderately traditional	20	25.0
Very traditional	-	-
Uniquely different	3	3.8
No answer	4	5.0
	80	

When asked to rate their teaching style as compared with that of other teachers they know, the majority of teachers (58%) described themselves as moderately progressive.

In response to the question "On the average, how often do you use television as a teaching tool, in your classroom?" the following distribution was obtained.

TABLE 74

FREQUENCY OF USING T.V.

	Never	Once/ Month	1-2/ month	3-4/ month	5 or more/ month	
Number	7	29	18	13	13	80
Percent	8.8	36.2	22.5	16.3	16.3	

It is of interest to note that for almost half of the teachers (45%), watching Moonvigil was one of the very few times that they had used television in their classrooms.

Although over half of the teachers (55%) indicated that they had participated as a player in a simulation game, the majority had never conducted a simulation game in their classrooms prior to playing Moonvigil. It should also be noted that 53.7% of the teachers attended a workshop sponsored by OECA and participation in a simulation game was part of the workshop activities.

TABLE 75

NUMBER OF TEACHERS WHO HAD PARTICIPATED IN A SIMULATION GAME

	Participated	Did not Participate	
Number	44	36	80
Percent	55.0	45.0	

TABLE 76

NUMBER OF TEACHERS WHO CONDUCTED A SIMULATION GAME IN THEIR CLASSROOM

	Conducted Game	Did Not Conduct Game
Number	25	55
Percent	31.0	69.0

TABLE 77

SOURCE OF INFORMATION ABOUT MOONVIGIL

	Number	Percent
Principal/Vice-Principal	35	43.8
Another Teacher/Friend	6	7.5
OECA Advertising	16	20.0
Department of Education Regional Office	12	15.0
Other	11	13.7

Most teachers (43.8%) learned about Moonvigil from their Principal or Vice-Principal.

Teachers offered a variety of reasons to the open-ended question as to why they decided to use Moonvigil with their class. A summary of the responses given is shown in Table 78.

TABLE 78

REASONS FOR USING MOONVIGIL

Response	Number and Percent Making Comment	
Introduce pupils to a new way of learning, novelty, new idea, improve certain skills	23	28.8
Curiosity/experimentation	13	16.3
Principal or Superintendent's request	13	16.3
Foster a sense of co-operation in the class	8	10.0
Good opportunity to stand back and observe the class working	6	7.5
Other	7	8.8
No answer	10	12.5
	80	

Comments regarding Moonvigil as a new way of learning were made by 28% of the teachers. The following are a few illustrations of teachers' responses which fell in this category.

.... It was new different, looked extremely interesting, useful. I thought the students in my class would enjoy, benefit from it.

.... I was intrigued by its approach and by the type of learning both the students and I would achieve.

.... Teaching at the 7 level for the first time I was anxious to find new ideas for courses. Also I am presently studying a course in Social Science so my interest is high in this area.

.... The pupils needed group work but it was necessary for them to be less dependent on me and more dependent upon themselves.

.... An excellent vehicle for introducing a study of community.

.... I thought it to be a good exercise in leadership. My class needs to improve on listening skills and I thought this would help.

.... Try something new.

Illustrations of Category two regarding curiosity or experimentation are as follows:

.... Curiosity, to see how the participants would react to instruction given by a television personality.

.... To see how my class would react to television instruction - to provide an interesting unit for my class to work on.

.... Interested in new methods and experimentation with new methods.

.... I am a science teacher and I wanted a new different unit to use with one of my classes.

Ten percent of the teachers looked on Moonvigil as an opportunity to improve co-operation among the students in their class. For example:

.... I thought it would be good to get my students to work in groups and to respect one another's actions.

.... I thought it would be a great experience for the students. As I have a "slow" group of sixes and a "fast" group of fives, I felt it would be good for them to work as a group; that it would give success to all. I thought they'd really enjoy it.

.... I wished to try something new with this class as I felt they were not functioning as a group.

.... I felt that this particular activity would help to foster a sense of co-operation among my students.

Seventy-five percent of the teachers played the game in their classrooms.

TABLE 79

PHYSICAL SETTING

	Classroom	Open Area	Gymn	Other	
Number Percent	60 75.0	10 12.5	3 3.7	7 8.8	80

Fifteen percent rated the room as being not suitable for playing the game, the major reason being that the room was too small.

TABLE 80

RATING OF SUITABILITY OF ROOM

	Very Suitable		Alright/ Not Bad		Not At all Suitable	
Number	16	14	38	9	3	80
Percent	20.0	17.5	47.5	11.3	3.8	

TABLE 81

REASONS FOR UNSUITABILITY OF ROOM

	Too Small	Too Large	Split Class To Avoid Noise	Other	
Number	6	1	1	4	12
Percent	50.0	8.3	8.3	33.3	

Just over half of the classrooms were set up to view Moonvigil on one T.V. receiver. It should be noted that two teachers indicated that had no T.V. receiver!

TABLE 82

NUMBER OF T.V. RECEIVERS

	One T.V.	Two T.V.	None	No Answer	
Number	42	31	2	5	80
Percent	52.5	39.0	2.5	6.2	

Most classes (76%) viewed Moonvigil at 9:30 a.m.

TABLE 83

VIEWING TIME

	9:30	1:50	2:50	Video	No Answer	
Number	64	4	3	12	10	84*
Percent	76.0	4.8	3.6	14.5	12.0	

*Some classes viewed at two different times.

Workshop Participation

Fifty-four percent of the teachers who returned questionnaires had attended a workshop sponsored by OECA. Of those who attended a workshop, 70% indicated very strongly that the workshop helped to give them confidence for using Moonvigil and 60% indicated that they felt the workshop increased their competence in using Moonvigil.

TABLE 84

RATING OF TEACHER CONFIDENCE AND COMPETENCE AS A RESULT OF ATTENDING WORKSHOP

	High Confidence				Low Confidence	
Number	8	22	10	2	1	43*
Percent	18.6	51.2	23.3	4.6	2.3	

	High Competence				Low Competence	
Number	7	19	13	2	2	43*
Percent	16.3	44.2	30.2	4.6	4.6	

*Number of responding teachers who participated in a workshop.

When asked to indicate what the most helpful features of the workshop were, two main categories were evident.

TABLE 85

MOST HELPFUL FEATURES OF WORKSHOP

Response	Number and Percent Making Comment	
Increased familiarization with program, materials, game.	26	60.5
Able to understand student feeling, situation, roles	13	30.2
Other	4	9.3

Sixty percent of the teachers felt that the opportunity to see part of a Broadcast and use the Emergency Procedure Kit was the highlight of the workshop for them. The following comments provide a few illustrations.

.... Working through first day.

.... Objectives of game well explained. Realization that this was an experiment for all of us (no feelings of incompetence).

.... The T.V. programme and using the survival kit.

.... Becoming involved in the game.
Finding out something of the background.
Hearing the various experiences of those who have tried Moonvigil.

.... Actually seeing the Broadcast helped me to know what to expect. I very much liked seeing another class during the debriefing. I was able to use this observation in seeing my own class in comparison. I felt more confident as debriefing officer because I knew what I was debriefing.

.... Seeing all program in one runthrough.

.... Knowledge of the aims.
Knowledge of the content.
As a result of doing part of the operation I could see what to look for in observing.

Some illustrations of the second category, "increased understanding of student feeling", are as follows:

.... Participating as a student in the first Moon Day.

.... We participated in the first program of the simulation game. We became aware of some of the problems the children would have to face.

.... Observing group interaction.

.... To inform as to the purpose and what "Moonvigil" was. We had a chance to participate in Day 1 of the programme. Later, when the pupils took their part in "Moonvigil" I was more tolerant of confusion when I recalled the confusion I had had.

.... In playing the game I was able to understand in some way why the children responded as they did.

Most of the comments regarding the least helpful features of the workshop had to do with instructions regarding debriefing.

TABLE 86

LEAST HELPFUL FEATURES OF WORKSHOP

Response	Number and Percent Making Comment	
More instructions re debriefing	9	20.9
Too much time on generalities	4	9.3
Felt there were no features of workshop which were not helpful	7	16.2
Other	14	32.5
No answer	9	20.9
	43	

The following are some examples of teacher comments re debriefing:

.... Not specific enough about methods of debriefing.

.... The methods for debriefing not clearly understood and workshop did not help.

.... I would have liked to be able to discuss the programme in the middle of its operation. I would also like a meeting before beginning the debriefing to find out the experiences of others.

.... There could have been more instructions given re the debriefing session.

.... There was very little explanation about the debriefing and reflection activities. A few more suggestions in ways to prepare pupils for the experiment without telling them outright what was going to happen would have been helpful.

Eighty-six percent of the teachers felt that the teacher's guide was helpful in providing them with both confidence and competence for playing Moonvigil. *Materials*

TABLE 87

RATING OF TEACHER'S GUIDE IN PROVIDING CONFIDENCE AND COMPETENCE

	High Confidence				Low Confidence	No Answer	
Number	18	28	23	7	1	3	80
Percent	22.5	35.0	28.8	8.8	1.3	3.8	

	High Competence				Low Competence	No Answer	
Number	17	30	23	6	1	3	80
Percent	21.3	37.5	28.8	7.5	1.3	3.8	

When asked for their opinion of the Emergency Procedures Kit and its materials, 77% indicated that they felt the materials were excellent. The following comments illustrate their response.

.... Excellent, but more written exercises may have been helpful.

.... Excellent - extremely well prepared.

.... If effectively used, it was very good. Any difficulty came from inability to understand and follow directions.

.... Well done, seemed to be carefully planned.

.... Satisfactory - pupil reaction to food sticks.
Very strong - good or very bad response about equal.

.... It certainly helped to create the proper atmosphere. The food sticks were particularly "enjoyed" by the members. Instructions were simple and precise.

.... In the context of the goals, very good.

.... The kit included everything for the pupils. It was very complete and well organized.

Sixteen percent indicated that they felt the game was too juvenile or the instructions or contents were poor (see Table 88). The five teachers who felt the materials too juvenile had older classes.

TABLE 88

RATING OF MATERIALS IN E.P. KIT

Response	Number	Percent
Good, excellent, suitable	63	77
Poor instructions	7	8.5
Too juvenile	5	6.0
Poor equipment e.g. badges, food sticks	2	2.4
Other	3	3.6
No answer	2	
	82*	

* Some gave more than one response

The following are illustrations from the remaining categories.

.... Daily procedures should be stressed more - perhaps a special sheet entitled - You must do this every day.

.... The double opening box containing the food sticks was confusing to students. Some didn't see it at first. Others were confused as to whether they used one side in rationing or both.

.... The students found it a bit childish. They didn't like the food sticks.

Preinvolvement Activities

In response to the question, "How much time did you spend in preinvolvement activities with your pupils?" the following were received:

TABLE 89

AMOUNT OF TIME SPENT IN PREINVOLVEMENT

	1 hour or less	1 - 4 hours	4 - 8 hours	More than 8 hours	
Number	18	33	24	5	80
Percent	22.5	41.3	30.0	6.2	

The following table summarizes which pre-involvement activities were used and the degree of involvement of the class.

TABLE 90

PREINVOLVEMENT ACTIVITIES AND RATING OF INVOLVEMENT

Preinvolvement Activities	Very Involved				Little involved	Not Used
Class Discussion	17 (21)*	19 (24)	29 (36)	9 (11)	2 (3)	4 (5)
Research Projects	14 (18)	8 (10)	14 (18)	11 (14)	7 (9)	26 (33)
Role Playing	4 (5)	1 (1)	9 (11)	5 (6)	10 (13)	51 (64)
Gathering Materials	24 (30)	16 (20)	9 (11)	9 (11)	2 (3)	20 (25)
Making Materials	33 (41)	7 (9)	6 (8)	5 (6)	6 (8)	23 (29)

* The number in brackets represents the corresponding percentage.

In addition to the above activities, teachers indicated that films were also used. When asked "Now that you have played the game, what might you have done, but did not, in the preparation stages which would have facilitated playing the game?" the group responded in the following manner.

TABLE 91

PREPARATION SUGGESTIONS

Response	Number and Percent Making Comment	
Played similar simulation game/role playing	19	20.4
More time	12	12.9
Research projects	11	11.8
Introduced vocabulary	9	9.7
Nothing	6	6.4
Prepare room	5	5.4
Form crews	5	5.4
Other	13	14.0
No answer	13	14.0
	93*	

* More than one response given

Five examples of actual statements for the role playing category and five from the other categories are:

ROLE PLAYING

.... More of the experience of being on the moon and what it is like there (plays, reports) more general report writing.

.... Some role playing so they would take it more seriously.

.... Some sort of preliminary simulation game such as we had but simpler.

.... Games - giving instruction on use, to practice following; stress even more than I've done importance of listening, reading, etc.

... More role playing - explore opportunity to allow for reliance on each other.

STATEMENTS FROM OTHER CATEGORIES

.... Given the students some advance instruction on how to play Space Navigation Game. It was not explained very well on the Broadcast or in Orange Manual.

.... More pre-involvement activities. Explanation of the expectations of crews on all of the Moon days.

.... I would have liked to have played some games where the two groups would not interact. I should have gone through the meaning of such terms as "crew", "responsible".

.... Probably ensured that all pupils understood all terms used.

.... Introduce more vocabulary items as found in the broadcast.

To conclude the section on pre-involvement, teachers were asked to indicate, in terms of the objectives given in the Teacher's Guide, the degree of success of pre-involvement activities in their class with reasons for their rating.

TABLE 92

RATING OF PREINVOLVEMENT

	Very Successful				Complete Failure	No Answer
Number	28	25	15	8	0	4
Percent	35	31	19	10	-	5

Forty-nine gave reasons for the above ratings. Twenty-five noted that the success was due to high interest on the part of the children, while eight teachers stated that they received their kits late and hence their pre-involvement activities were not successful.

First Seven Moon Days

The following ratings were obtained for the degree of success of each day in terms of the objectives suggested in the Teacher's Guide.

TABLE 93

RATING OF FIRST SEVEN MOON DAYS

	Very Successful				Complete Failre	No Answer
Moon Day 1	16 (20)*	28 (35)	21 (26)	10 (13)	0	5 (6)
2	27 (34)	22 (28)	25 (31)	1 (1)	0	5 (6)
3	15 (19)	38 (48)	17 (21)	5 (6)	0	5 (6)
4	15 (19)	24 (30)	18 (23)	15 (19)	3 (4)	5 (6)
5	24 (30)	18 (23)	20 (25)	10 (13)	4 (5)	4 (5)
6	12 (15)	25 (31)	24 (30)	8 (10)	3 (4)	8 (10)
7	11 (14)	24 (30)	17 (21)	16 (20)	14 (18)	8 (10)

* Bracketed numbers are the corresponding percentages.

On a group basis, the degree of success was relatively high during the first three days, followed by three days of moderate success. The seventh day, however, left much to be desired, in that 30 of the 80 teachers selected "complete failure" or the adjacent rating to describe the success on that day, while 35 selected "very successful" or the adjacent category for that day.

The reasons for the ratings tended to fall into one of five categories (see Table 94).

TABLE 94

REASONS FOR RATINGS

Response	MOON DAYS 1	2	3	4	5	6	7
High Interest	9	8	4	13	7	1	6
Specific Reference to game going well	1	5	8	4	5	5	6
Confusion/can't follow instructions	18	10	3	12	6	5	5
Activities not done	6	2	5	8	11	10	7
Bored	1	1	6	0	5	2	4
Total categorized	34	26	26	37	34	23	28

In our opinion, in the first two categories, the teacher was basing her rating of the success of the day in terms of the interest shown by the children and that the game was going well. For example:

.... Most of the class was extremely enthusiastic. Even low motivation pupils showed considerable interest.

.... Class was keen .... very excited.

.... This day was a real success. They quickly set up a hospital or isolation area. Each crew functioned as normal.

In the remaining three categories, the open-ended responses also tended to be in terms of the interest or how the game was going, but in a negative sense. For example:

.... The space navigation was not well done. There was confusion over the directions.

.... There was no isolation of any students caused from contaminted food. Appears the telecast or planning was at fault.

.... The students seemed bored today.

.... Space navigation exercise not done according to instructions.

Further insight into the daily playing of the game was gained by examining responses to, "On the average, how many questions did the pupils ask you during each Moonvigil day period?"

TABLE 95

AVERAGE NUMBER OF QUESTIONS

	None	1	2	3	4	5	6 or more	
Number	21	9	11	13	6	8	12	80
Percent	26.3	11.3	13.7	16.3	7.5	10.0	15.0	

In one-quarter of the classrooms, no questions were asked and on the average, across all days, there were very few questions posed by the pupils, according to the teachers.

Frequency and examples of the kinds of questions asked are as follows:

TABLE 96

KINDS OF QUESTIONS

Response	Number and Percent	
What (Who)	56	37.4
How	24	16.0
Is this right/are we supposed to...	22	14.7
Can we	14	9.3
Will you	8	5.3
When	6	4.0
Why	5	3.3
Other	2	1.3
No Answer	13	8.7
	150	

Some illustrations of the first three categories are:

WHAT/WHO

.... What do we do with the garbage bag?
.... What is the purpose of the message being coded?
.... What do we do if someone wanted to do anything?
.... What happens to someone who doesn't get a food stick a day?
.... What do we do now that we have finished before the time is up?
.... What does .... mean? e.g., isolation?
.... Who is supposed to do the decoding?
.... What does my group do?
.... What will we be doing next day?
.... What if there isn't enough food?

OTHER

.... How many food units do we hand out?
.... How does this navigation work?
.... How do we plot the course?
.... How do we go about changing jobs?
.... Is this right/are we supposed to?
.... Do we share food with other group?
.... Are we all one crew?
.... Are we supposed to do this now?
.... Is this the way we're supposed to do....?
.... Do we have to eat the food?

Debriefing
And
Reflection

Information for this section was gathered from parts of question 25 and questions 36, 37, 38, 43 and 44 of the Teacher Questionnaire.

In terms of the objectives given in the Teacher's Guide, the teachers rated the degree of success of these days as follows:

TABLE 97

RATING OF DEBRIEFING AND REFLECTION

	Very Successful				Complete Failure	No Answer
Debriefing	21 (26)*	27 (34)	16 (20)	4 (5)	0	12 (15)
Reflection	8 (10)	21 (26)	13 (16)	9 (11)	1 (1)	28 (35)

* Bracketed numbers represent corresponding percentages.

Based on the above teacher ratings, it would appear that debriefing was successful. Approximately one-third of the teachers did not respond to the reflection rating because they were still carrying out these activities at the time of response.

The response to question 36, "As a group how involved were the children in participating in debriefing days?" complements the response to question 25 described above.

TABLE 98

RATING OF PUPIL INVOLVEMENT DURING DEBRIEFING

	Very Involved				Not at all Involved	No Answer	
Number	19	32	21	5	0	3	80
Percent	23.8	40.0	26.3	6.2	-	3.8	

Slightly more than 50% of the respondents indicated that they intended to have three or more reflection days (See Table 99).

TABLE 99

NUMBER OF REFLECTION DAYS PLANNED

	One	Two	Three	Four	More Then Four	Other	No Answer
Number	11	17	14	28	1	2	7
Percent	13.7	21.3	17.5	35.0	1.3	2.5	8.8

When asked to describe what had been done during the reflection days to date, and/or what future projects might be expected, the responce patterns were similar and hence were combined (see Table 100).

TABLE 100

REFLECTION ACTIVITIES

Response		Number and Percent Making Comment	
Discussion and concepts		29	18
Discussion of specific institutions		26	16
Increased interest in space		15	9
Other		12	8
No answer	(38a)	33	21
	(38b)	45	28

Some illustrations of present and future projects are:

DISCUSSION OF CONCEPTS

.... Discussed division of laborer, specialization. Discussed how people have different needs and wants.

Discussed the city - problems, needs, how they are satisfied.

.... Role of institutions, should they be changed - how - how generation gap makes attitudes different.

.... Discussed basic needs in our society and what would happen if we didn't have these needs.

.... We discussed various group organizations that our society needs. From this we are each investigating the group structures involved in each.

.... Discuss general necessities in our society. Received answers such as health, food, etc. Plan to discuss their research work. They were to find out why these organizations came into existence.

.... Possible student made and evaluated questionnaire to various institutions concerning needs, roles, structures. Research into changing structures over the years.

.... Research on various institutions in the world - what jobs are involved - how they are defined - what changes would they make if they had control - would their change be selfish or for common good of all.

DISCUSSION OF SPECIFIC INSTITUTIONS

.... Discussion of governments (3 levels) and bureaucracy which is set up to carry out its legislation.

.... School Project. The structures of the school: the roles and responsibilities of the members in the school, e.g. Principal, Vice-Principal, teachers, secretary, nurse, janitor, pupils.

.... We discussed law and government and we plan on studying government as a topic.

.... Principal came in to talk about school as an institution and his role.

.... Students are researching different institutions and are bringing speakers to class from different organizations.

.... We are considering a comparison of various national governments.

.... We may go into the study of primitive societies.

.... Class is in process of comparing "needs" of different types of classes and schools by interviewing principals. Later we hope to interview personnel from different companies and see how they co-operate.

.... Speakers from Education, Medicine, Law Enforcement, Recreation, Municipal government.

.... This will tie into projects on the Canadian government, life in pioneer Canada, and in science to the animal cycles - how all things are dependent on something else.

Responses to the question "What kinds of conclusions did the class come to during debriefing and reflection sessions?" are summarized in Table 101.

TABLE 101

CLASS CONCLUSIONS

Response	Number and Percent Making Comment	
Need for organization during playing of game/need for co-operation	26	32.2
Need for institutions in society	20	24.8
Didn't see need for groups	3	3.7
Game was silly, childish	2	2.5
Other	4	4.9
No Answer	26	32.2
	81*	

* More than one response

Examples of the responses which were coded in the first two categories are as follows:

NEED FOR CO-OPERATION

.... Some groups found the real need for a leader.

.... Need to work together; leadership necessity. Listening was important.

.... Need for co-operation within group; need for listening and following instructions.

.... Basic organization of their own time was lacking.

.... Need for organized structures to accomplish goals.

.... How to improve group efforts in a similar situation.

.... They found that one crew was extremely unorganized.

.... Leaders are essential; co-operation is necessary.

.... During debriefing they all agreed that confusion and disorder were undesirable. They all disliked being ordered about by some crew members.

NEED FOR INSTITUTIONS IN SOCIETY

.... They understood how and why the groups were formed. They saw what roles evolved and who the powerful people were. They recognized institutions and the needs they fill.

.... That in all society everything has a beginning. Someone initiates a movement, which develops into an institution hopefully for the betterment or survival of mankind.

.... Effects of rebellion, riots, or rocking the establishment boat.

.... Had developed an insight toward institutions - what they are, their purpose and roles necessary to achieve their purpose.

.... Some institutions are necessary. Realize more fully the importance of having rules and guidelines.

Although question 44(a) "Did the class discuss the concept of institutions as outlined on page 13 of the Teacher's Guide on the Reflection Days? Please Elaborate." was an open-ended question, over 80% did not elaborate, which is reasonable in view of their responses to related questions discussed above (see Table 102).

TABLE 102

CONCEPT OF INSTITUTIONS

	Yes	No	Partially	Not discussed yet	Other	No Answer	
Number	35	8	5	8	1	23	80
Percent	43.8	10.0	6.2	10.0	1.3	28.8	

From the above table, we can conclude that the large majority of the classes who had reached the reflection stage, did discuss the concept of institutions.

For question 44(b), "Did they identify other institutions? Please elaborate." teachers again did not provide a great deal of elaboration beyond a "yes" or "no" response (see Table 103).

TABLE 103

OTHER INSTITUTIONS IDENTIFIED

	Yes	No	No Answer	
Number	36	9	35	80
Percent	45	11.3	43.8	

For this question, however, some teachers did list several institutions which had been identified, e.g. Sport Teams, Hospital, Police Departments, Fire Departments, Schools, Communications, Sanitation, The Church, World Health Organization, Red Cross, Recreation (YWCA), Government (Law), UNICEF, Family, Transportation, Cubs/Scouts/Brownies.

Pupil Involvement

Teachers were asked to rate their pupils in terms of their degree of interest and involvement in various aspects of the game.

When asked to rate different groups of students, the following response pattern was given.

TABLE 104

PUPIL INVOLVEMENT AS A FUNCTION OF ACHIEVEMENT AND MOTIVATION

	Very Involved	Involved	so-so	Not Too Involved	Not at all Involved	No Answer
High Academic Achievers	59 (74)	16 (20)	1 (1)	-	-	4 (5)
Average Academic Achievers	23 (29)	40 (50)	10 (12)	1 (1)	-	6 (8)
Low Academic Achievers	4 (5)	22 (28)	29 (36)	16 (20)	1 (1)	8 (10)
Highly Motivated	59 (74)	11 (14)	2 (3)	-	-	8 (10)
Average Motivated	6 (8)	39 (49)	18 (22)	5 (6)	1 (1)	11 (14)
Low Motivation	1 (1)	8 (10)	19 (24)	30 (38)	11 (14)	11 (14)

The majority (74%) of high academic achievers were rated by their teachers as being very involved, while average academic achievers tended to be involved but somewhat less than the high achievers, and low achievers tended to be moderately involved. A similar pattern was evident for the high, average and low motivated groups of students.

Approximately 44% of the teachers who responded reported that the interest of their class tended to increase during the week of the broadcast, while 25% reported that the interest of their class decreased (see Table 105).

TABLE 105

CHANGE OF PUPIL INTEREST

	Interest Increased		About The Same		Interest Decreased	
Number	17	18	25	13	7	80
Percent	21.3	22.5	31.0	16.3	8.8	

Approximately 70% of the teachers reported that the majority of their pupils carried out their duties as outlined in the Emergency Procedures Kit.

TABLE 106

NUMBER OF PUPILS WHO CARRIED OUT DUTIES IN E.P. KIT

	Most		About Half		Hardly Any	
Number	27	30	19	2	2	80
Percent	33.8	37.5	23.8	2.5	2.5	

In response to the question "In your opinion did your pupils assume the roles of crews stranded on the moon?" the following responses were given.

TABLE 107

PUPIL ROLE ASSUMPTION

	At all times		Sometimes		Never	No Answer	
Number	4	29	37	7	2	1	80
Percent	5.0	36.2	46.3	8.8	2.5	1.3	

Seventy-two percent of the teachers felt that their pupils had achieved the objectives of Moonvigil as outlined in the Teacher's Guide (see Table 108).

TABLE 108

ACHIEVEMENT OF OBJECTIVES

	Yes	No	Yes and No	No Answer	
Number	58	11	4	7	80
Percent	72.5	13.7	5.0	8.8	

Of those who felt their students did not achieve the objectives, four felt it was due to confusion over the instructions, e.g.

.... In many cases the pupils became too confused to effectively operate without guidance;

Two felt it was due to low interest on the part of their students, e.g.

.... They found it more a game and a way to get out of other subjects, e.g. Science notes and reading comprehension.

.... Your aims and objectives were too far removed from the game situation

and five felt it could be attributed to low ability on the part of their students, e.g.

.... Listening skills are so poorly developed with this class that many of the objectives were only partly achieved.

Sixty percent of the respondents felt the time and effort expended by their pupils to achieve the objectives for Moonvigil was worth their while (see Table 109).

TABLE 109

TIME AND EFFORT OF PUPILS WORTHWHILE

	Yes	No	So-So	Other	No Answer	
Number	48	10	7	13	2	80
Percent	60.0	12.5	8.8	16.3	2.5	

The responses of the teachers to the question "What additional insights, if any, did you gain about your students, as a result of playing the game?" are summarized in Table 110.

TABLE 110

TEACHER INSIGHTS ABOUT THEIR PUPILS

Response	Number and Percent Making Comment	
Leadership roles	30	36.6
Reversed opinions formed earlier/ new information about pupils	14	17.1
Confirmation of earlier insights about class	6	7.3
Other	14	17.1
No Answer	18	22.0
	82*	

* More than one response coded for some respondents

Some illustrations from the two largest categories of responses follow.

LEADERSHIP ROLES

.... Leadership, co-operativeness, peer relationships, saw slow pupils happy because finally found something they could be successful with, with other students.

.... The program seemed to bring out the leadership qualities of many of the students who normally do not participate in class.

.... The class leaders were very evident and I noticed some people who could lead when given a chance but rarely do in the classroom.

.... The brightest were not always the leaders. Personality played an important part.

.... 1. It is not always the most capable person who holds position of leadership.
2. Some students are born leaders - others look to them and they take charge naturally.

.... I was able to discover hidden leadership qualities as well as see how they functioned without teacher leadership.

NEW INFORMATION

.... They are much less willing to change and adapt than I thought.

.... Insights into individual performance and the great lack of listening ability.

.... Hidden characteristics and talents - some became much more involved than I thought they would.

.... I discovered that they really don't READ things carefully and think things through properly before beginning something.

.... A few slower pupils, academically, were very impressive in their comments during debriefing and reflection activities.

.... Some irresponsible students (by reputation) assumed responsible roles and did so quite well.

.... Here is where the benefits really are - I learned much about their natures - agressive, retiring - how kids of 13 see themselves within their peer group.

Teacher's Role

Fifty-eight percent of the teachers did not initiate any interaction to assist pupils during each Moon Day (see Table 111).

TABLE 111

FREQUENCY OF INITIATING INTERACTION DURING EACH MOON DAY

	More Than 5 times	3 - 5	1 - 2	Never	
Number	1	8	25	46	80
Percent	1.3	10.0	31.0	58.0	

Twenty-one of the 80 teachers felt there was a need to modify the game; eight of the 14 who elaborated on this point made suggestions with regard to clarification of instructions. For example:

.... Day seven required a lead up. More activities are required for each Moon Day.

.... On Day 1, more definite instructions had to be given. When coded messages were first given, Crew 2 had to be told how to decode.

.... Because of hesitancy to play game at the start - my class needed instruction and guidance to play. Also they needed more stress placed on working in separated groups with intermingling.

.... Beter receiving transmission, I reminded the students to follow instructions to the letter.

Two other examples may also be of interest -

.... The boundaries of the spaceship were made smaller. Many students were not conscious of their space ship limits. By imposing boundaries they became aware of their limits.

.... During the isolation period in one crew, all had eaten the contaminated food. The modification was to select one person for isolation. The pupils chose the one student who was least co-operative in activities.

In responding to the question,"How difficult was your role as an observer during the first seven days?" 50% of the teachers selected "very difficult" or the adjacent category.

TABLE 112

TEACHERS' ROLE AS OBSERVER

	Very Difficult				Very Easy	
Number	13	26	15	15	11	80
Percent	16.3	32.5	18.8	18.8	13.7	

Twenty-seven of the 39 teachers who found their role difficult, attributed the difficulty to not being able to intervene. For example:

.... It was fairly difficult because their mistakes could have easily been corrected, but I could not interfere.

.... Children needed assistance in reading and math.

.... Some of the squabbles over jobs were carried into the classroom after the daily session was completed. On the last day, the play became quite dangerous.

.... Difficult to see groups in confusion - saw a need to help or guide them.

.... Pupils had difficulty reading instructions. In the beginning, blue group was only going to give rations to themselves.

.... I found it difficult to justify the amount of time being wasted by some pupils.

.... I always wanted to give them some assistance when they were in difficulty.

In answer to the question "Were you able to limit your role as debriefing officer to seeking information and enabling students to evaluate their experiences?" the following response pattern was given.

TABLE 113

FREQUENCY OF LIMITING DEBRIEFING ROLE

	Always	Sometimes			Never	No Answer	
Number Percent	9 11.3	39 48.6	23 28.8	5 6.2	1 1.3	3 3.8	80

Sixty-two of the 80 teachers left the open-ended question, "If you found it necessary to expand the role, please describe what you did and why, " blank. Of the 18 who responded, nine stated that they clarified answers and four stated that they recalled activities for the children. Examples of their statements are:

CLARIFYING ANSWERS

.... Naturally had to tell some people a bit so they could go ahead.

.... Occasionally it was necessary to make explanations.

.... Occasional clarification of answer from pupils who were having difficulty expressing their ideas.

.... I tried to get them to give examples and make comparisons re: Moon-earth activities.

.... I formulated the questions which would permit them to see the connection between Operation Moonvigil and institutions in our society.

RECALLING ACTIVITIES

.... The children from each crew sometimes contradicted a statement by the other so we had to discuss the actual happening.

.... The data input from debriefing kit was not useful in their eyes. I felt it important to review the things to groups and individuals.

.... Very often when the students gave their evaluation, I would try to draw a comparison with an experience they had recently encountered.

In response to the questions "Would you consider using Moonvigil again with another class?" and "Would you recommend using Operation Moonvigil to other teachers?" over 90 percent of the teachers selected a positive category (see Tables 114 and 115).

Future
Use of
Moonvigil

TABLE 114

MOONVIGIL CONSIDERED FOR USE WITH ANOTHER CLASS

	Yes	No	Qualified Yes	No Answer	
Number	57	4	18	1	80
Percent	71.3	5.0	22.5	1.3	

TABLE 115

MOONVIGIL RECOMMENDED TO OTHER TEACHERS

	Yes	No	No Answer	
Number	77	2	1	80
Percent	96.0	2.5	1.3	

The reasons for the above responses are summarized in Table 116

TABLE 116

REASONS FOR RECOMMENDING MOONVIGIL

Response	Number and Percent Making Comment	
Chance to observe and reflect on students	29	36.2
Approved of objectives of Moonvigil	14	17.5
Interesting, worthwhile, enjoyable	10	12.5
New way of learning	10	12.5
Negative	2	2.5
Other	9	11.3
No Answer	9	11.3

Some illustrations for the first two and the "Negative" category in the above are as follows:

CHANCE TO OBSERVE AND REFLECT ON STUDENTS IN CLASS

.... I feel the experience (and reflection about it) can be important to the participants - but the importance can't be measured easily, it will come with future growth and development. The teacher has a chance to observe and reflect on student interaction and vary the class program to meet needs that become evident and interests that vary.

.... It gave me insight into my pupils. For this reason I would like to see it done earlier in the school year. It is stimulating providing you are working with an above average group. Not for slow children.

.... It is a good eye-opener for both students and teachers. The simple ideas of group organization in themselves are helpful as well as the insights it provides in the area of institutions.

.... Particularly good for teacher who wishes to discover more about class through observation during activities.

.... You see the leaders very definitely. You see those who argue frequently.
You note those who look "bored" even during this activity.
You really get an opportunity to sit back and see what's happening.

.... This proved to be a fantastic opportunity for me to watch the reactions of various individuals in the group situation. They learned a lot about communicating ideas, co-operating and assisting others.

APPROVED OF OBJECTIVES OF MOONVIGIL

.... It gives the students a chance to reflect their experiences and behaviour with the way other members of society behave. Gives an understanding of why people act the way they do and what can be done to modify or help their behaviour.

.... I feel that the simulation was excellent. It was well set up and moves in a logical pattern and sequence.

.... It shows one way the T.V. can be used with a good level of freshness and success.

.... It gives the pupils an opportunity to work together in order to fulfil a certain task. It teaches them how to follow instructions and why institutions in the world today are necessary.

.... Simulation games are closer to reality than we usually get. This is a good example,

.... I feel the simulation has definite merit in the objectives it attempts to meet.

NEGATIVE

.... It allows the kids too long a period of time to experience it - the moon is too alien to be able to relate to.

.... Far too much energy and time expended for minimal results, not enough to do .... causing children to become disinterested towards the latter stages.

"Would you use other television programs which provided a direct complement for specific classroom activities?"

TABLE 117

INTERESTED IN USING OTHER T.V. PROGRAMS

	Yes	No	No Answer	
Number	71	3	6	80
Percent	89.0	3.8	7.5	

The above percentage of "Yes" responses is very high when one considers that 45% of the respondents use television, on the average, once a month or less. The particular kinds of programs that would be of interest are summarized in Table 118.

TABLE 118

KINDS OF PROGRAMS DESIRED

Response	Number and Percent Making Comment	
Academic Programs	39	46.5
Other Simulation games	6	7.1
Current issues snd information	5	5.9
People overcoming problems	3	3.6
No answer or too vague	27	36.9

Some examples of kinds of programs listed under the first three categories are:

ACADEMIC PROGRAMS

.... Anecdotal incidents in Canadian History (Pierre Berton type)

.... Specific math problem e.g. general geometry topic for a class to solve.

.... As English teacher I should be primarily interested in programs for literature, plays, discussions, interviews with authors.

.... History - development of pioneer life, etc. Math and English literature.

.... Social Studies, Science - with themes related to human relationships.

.... Science activities, Social studies - explorers, Mathematics activities, Music.

.... Social studies oriented, e.g. you are Christopher Columbus attempting to convince people the earth is round - your trials, your voyages, your failures and successes.

SIMULATION GAMES

.... Shows which would instruct pupils to role play situations which would be helpful in developing educational goals (study habits, organization, etc).

.... Simulated field trips with printed material along with it for classroom use.

CURRENT ISSUES

.... Information programs giving more up-to-the-minute information than is available through films and books.

.... (1) A programme to illustrate different kinds of prejudice prevalent in different societies. (2) A programme to make students aware of their poverty in some countries.

.... Current issues - world wide e.g. Israel level situation. Racial question - negro vs. white. Canadian Indian situation. The poor - do they have a right to live on welfare, etc. These kids are really concerned on above.

In order to determine whether the amount of time spent in preinvolvement activities was related to various aspects pertinent to the success of the game, the data for several questionnaire items was analyzed in terms of three groups of respondents:

Preinvolvement Activity Time Related to Success of The game

1. Those who spent one hour or less in preinvolvement activities.
2. Those who spent one to four hours in preinvolvement activities.
3. Those who spent four hours or more in preinvolvement activities*

When the ratings of the success of the preinvolvement activities were compared, for the three groups as defined above, the following was obtained:

TABLE 119

SUCCESS OF PREINVOLVEMENT ACTIVITIES

	GROUPS 1	2	3
Very successful	1 (5.5)	15 (45.4)	12 (41.4)
	5 (27.8)	12 (36.3)	8 (24.1)
	4 (22.2)	4 (12.1)	7 (20.7)
	7 (38.9)	1 (3.0)	
Complete failure			
No answer	1 (5.5)	1 (3.0)	2 (6.9)
	18	33	29

---

[*] As there were only five respondents who indicated that they had spent more than eight hours in preinvolvement, it was felt that this number was too small to analyze separately. These people were therefore included in group 3.

The ratings for the Moondays yielded the following when combined:

TABLE 120

SUCCESS OF MOONDAYS RELATED TO THE THREE PREINVOLVEMENT GROUPS

		GROUPS	
	1	2	3
Very successful	25 (20)	42 (20)	53 (30)
	44 (35)	81 (38)	54 (29)
	39 (31)	53 (25)	50 (28)
	12 (10)	32 (15)	21 (12)
Complete failure	5 (4)	6 (2)	3 (1)
	125	214	181

Although no statistical tests were conducted, inspection of the above table indicates no relation between amount of time spent in preinvolvement and the success of the Moondays.

When the frequency of role assumption by the pupils was examined in terms of the three groups, no relation was found.

TABLE 121

FREQUENCY OF ROLE ASSUMPTION BY THE THREE PREINVOLVEMENT GROUPS

	GROUPS 1	2	3
At all times	1 (5.5)	3 (9.1)	
	6 (33.3)	9 (27.3)	14 (48.3)
Sometimes	7 (38.9)	16 (48.5)	14 (48.3)
	2 (11.1)	4 (12.1)	1 (3.4)
Never	2 (11.1)	-	-
No answer	-	1 (3.0)	
	18	33	29

When the responses to the question "Was th time and effort of the pupils to achieve the objectives as outlined in the Teacher's Guide worth their while?" were tabulated for the three groups, the following was obtained:

TABLE 122

TIME AND EFFORT TO ACHIEVE OBJECTIVE RATING BY THE THREE PREINVOLVEMENT GROUPS

	GROUPS 1	 2	 3
Yes	10 (66)	20 (72)	18 (82)
So-So	-	4 (14)	3 (14)
No	5 (33)	4 (14)	1 (4)

In this case, although the number of respondents is too small for statistical tests, it is apparent that teachers who spent more time in preinvolvement, had a much greater tendency to feel that the time and effort spent by the pupils during Moonvigil was worthwhile.

The success of debriefing and reflection days was not related to preinvolvement time (see Tables 123 and 124).

TABLE 123

RATING OF SUCCESS OF DEBRIEFING BY THREE PREINVOLVEMENT GROUPS

	GROUPS 1	GROUPS 2	GROUPS 3
Very successful	3 (17)	11 (33)	7 (24)
	5 (28)	10 (30)	12 (41)
	7 (38)	5 (15)	4 (14)
	2 (11)	1 (3)	1 (3)
Complete failure	-	-	-
No Answer	1 (5)	6 (18)	5 (17)
	18	33	29

TABLE 124

RATING OF REFLECTION BY THREE PREINVOLVEMENT GROUPS

	GROUPS 1	GROUPS 2	GROUPS 3
Very successful	3 (17)	5 (15)	-
	5 (28)	10 (30)	6 (21)
	4 (22)	3 (9)	6 (21)
	-	4 (12)	5 (17)
Complete failure	1 (5)	-	-
No answer	5 (28)	11 (33)	12 (41)
	18	33	29

However, the number of reflection days the teachers planned to have, was related positively to the amount of time spent in preinvolvement, i.e. the greater the preinvolvement time, the more days were planned for reflection.

TABLE 125

NUMBER OF REFLECTION DAYS PLANNED
BY THREE PREINVOLVEMENT GROUPS

	GROUPS		
	1	2	3
1 Day	5 (27.8)	4 (12.1)	2 (6.9)
2 Days	2 (11.1)	10 (30.3)	5 (17.2)
3 Days	6 (33.3)	5 (15.2)	3 (10.3)
4 Days	3 (16.7)	10 (30.3)	15 (51.7)
More than 4 Days	-	1 (3.0)	-
Other	1 (5.5)	1 (3.0)	-
No answer	1 (5.5)	2 (6.1)	4 (13.8)

Summary

The eighty teachers whose questionnaire responses were analyzed taught grades five to ten with a high percentage teaching a combined grade. More than half rated themselves as moderately progressive while one quarter selected moderately traditional. The fact that almost half seldom use television is noteworthy. Most had not used simulation games with the children and many saw Moonvigil as a new way of learning.

Slightly more than half the teachers attended a workshop and gave it a high rating in terms of giving them confidence and competence. The teachers' guide, another supporting vehicle, was rated fairly highly but it is obvious from this and earlier chapters that too many teachers did not follow the directions outlined. Twenty percent of the teachers spent less than an hour in preinvolvement activities, while the remaining group were approximately split between 1 - 4 and 4 - 8 or more hours. Preinvolvement time did not seem to be related significantly to the success of the game. Only 13% responded with "spend more time" when asked what they would do differently during preinvolvement, although additional time may be inferred in another 40% of the responses, e.g., introduce specific vocabulary, play simulation games, conduct role playing exercises and have students prepare research projects.

In my opinion, by the above responses, the teachers are also expressing concern about the low development of the children's television listening and reading for action skills and especially their group interaction skills. Some of the conclusions the classes came to during the debriefing and reflection sessions also reinforce this view since approximately half the comments were related to the need for greater organization and co-operation among students.

The teachers' rating of the success of the Moondays is somewhat similar to the pattern in the observed schools. The first three Moondays were rated relatively highly with the children being able to play the game as intended with much evidence of interest and enjoyment. Most of the children tended to assume the roles of crews stranded on the moon. Moondays 4 - 6 were moderately successful and Moonday 7 was rated poorly. The debriefing and reflection activities were given high ratings for the most part, although the response rate was low for the reflection days because of the December 3rd questionnaire mailing deadline. Certainly a wide variety of institutions and corresponding needs and roles were mentioned, and one-third of the teachers indicated that their classes concluded that institutions were needed.

Eighty percent of those responding felt that pupils did achieve the objectives of the game, and over 80% of those selecting either "Yes" or "No" said the time and effort on the part of the pupils was worthwhile.

About one-quarter of the teachers modified the game by clarifying instructions and about half found their role difficult since they were not able to intervene. More than 90% would recommend Moonvigil to other teachers and would play it again with another class in the future. The reasons for this strong endorsement are divided approximately between statements supporting the different role for the teacher and about Moonvigil. In the latter, reasons are first given in terms of the quality of the game and secondly as an interesting and enjoyable new way of learning for pupils. It is to be remembered that almost half of these advocates do not use television regularly and heard of Moonvigil through their supervisors.

PUPIL QUESTIONNAIRES AND DIARIES

A random sample of 229 of the approximately 480 pupil questionnaires returned by December tenth were analyzed and the results reported in this section. The questionnaires selected included approximately equal numbers of boys and girls (see Table 126) who for the most part were in grades 5 - 8 (see Table 127).

TABLE 126

SEX OF PUPILS

	Boys	Girls	
Number	107	122	229
Percent	47	53	

TABLE 127

GRADE LEVEL

	5	6	7	8	9	10	
Number	31	77	51	60	8	2	229
Percent	14	34	22	26	3	1	

Approximately one-third of the questionnaires were from pupils in Red group, one-third from Blue group and one-third from Orange group (see Table 128).

TABLE 128

GROUP MEMBERSHIP

	Red Group	Blue Group	Orange Group	
Number	77	77	75	229
Percent	34	34	32	

In response to the question, "If your teacher said the word "Moonvigil" to you, what would you think of?" the following responses were received (see Table 129).

TABLE 129

RESPONSES TO THE STIMULUS "MOONVIGIL"

Response	Number and Percent Making Comment	
Moon, space, spaceships, universe, stranded	124	53
Comments which describe some aspects of the game, e.g. "our groups", "exercises", etc.	48	21
Brief comments re "what we did"	23	10
Descriptive adjectives, e.g. "exciting", "interesting".	20	8
Other	20	8
	235*	

* More than one response coded from some pupils.

The following are illustrations of the pupils' comments which were coded in the first two categories:

MOON/SPACE

.... I would think of some kind of expedition on the moon.

.... The moon.

.... I'd think of things about space like the Moon rockets.

.... I would think of the moon and a moon villiage and being stranded on the moon and living their and doing a project on the moon.

DESCRIPTION OF GAME

.... If my teacher asked me about "Moonvigil" I would say three groups and foodsticks and the telecast and the exercises.

.... I would think of skylab and mission control and computer loopy and the TV set from which we got our instructions each day.

.... The first thing I thought of was fun and games. Then Orange group because that was the group I was in. Then I thought of debriefing after the trip.

.... I would think of space, the project which we just finished and mission control.

OTHER

.... I would it has something to do with easter. Because I like the midnight vigil and I go to it every year. So I would think it would have something to do with easter.

.... Nothing.

The pupils were almost equally divided as to whether or not they were afraid they wouldn't be rescued.

TABLE 130

PUPILS AFRAID THEY WOULD NOT BE RESCUED

	Yes	No	
Number	103	126	229
Percent	45	55	

Of those who were afraid, the reasons for their fear fell into three categories (see Table 131)

TABLE 131

REASONS FOR BEING AFRAID

Response	Number and Percent Making Comment	
Reference to food contamination; food running out	50	48
Reference to Sky Lab Crew missing; T.V. relaying messages re problems	20	19
General statement, "Thought we wouldn't get rescued"	15	15
Other	18	17
No answer	1	1
	103	

The examples which follow illustrate two of their major reasons for being afraid.

FOOD CONTAMINATION

.... I thought we wouldn't get saved in time when we were short of food for the number of days left.

.... Yes things kept on happening at mission control like when the square food units were thought to be contaminated.

.... Yes because each day we were running low of food.

SKYLAB CREW MISSING

.... Sometime I was afraid because skylab was missing.

.... A few times we thought we missed our proper directions and thought we needed them to live or survive.

.... When the skylab crew abonded the space station and they were our rescue party and they would help us get back to earth.

Those pupils who indicated they were not afraid gave two main reasons

TABLE 132

REASONS FOR NOT BEING AFRAID

Response	Number and Percent Making Comment	
Knew we would get rescued	92	73
It was a game, "phoney"	27	21
Other	7	6
	126	

KNEW WE WOULD GET RESCUED

.... I was not afraid because I knew that our crew knew what they were doing and they were always on the job.

.... No I thought we would go on and on all the thing because they told us that they have lost us and can't find us and thing like that.

ONLY A GAME/PHONEY

.... No because it was only a game which they spend millions of dollars on.

.... No because it was only a TV program but if I were stranded on the moon really I would be afraid.

.... No because I knew it was foney.

When asked "If you were stranded on an uninhabited island, what would you do?", as a group, pupils indicated that there were eight types of things they would be concerned about.

TABLE 133

THINGS PUPILS WOULD DO IF STRANDED ON UNINHABITED ISLAND

Response	Number and Percent Making Comment	
Food - ration it, get it	192	26
Build shelter - hut/protection	133	18
Communications - signal for help	111	15
Organize, make groups, give people jobs	78	11
Health - exercise	73	10
Morale - entertainment "no fighting", "keep calm"	58	8
Make tools, other implements	46	6
Explore	24	3
Other	17	2
No answer	3	1
	735	

Most pupils mentioned at least three or four of these categories . The following are several verbatim answers given by the pupils.

.... I search for shelter
2 search for food
3 search for fresh water
4 fire wood
5 wepons
6 entertanment
7 First aid (natural medacines)

.... 8 girls
9 tame animals
10 type of comunication

.... Well we would have to orginase, make shelters out of various things. We would have made a restriction to know fore we explore. We should have a partner wherever we went. We would find food, and we would balance the food so we would have enough food to last us till rescue. We should have bon fires and other forms of telling ships or airplanes that we are here.

.... For one we would need a doctor. This way everybody could keep in top physical shape. Then we need weapons to protect ourselves and also kill our food. Then we'd need some sort of communication so we could keep contact with our rescue crew or control board. We'd need food like meat, fruit-apples, oranges, bananas, we'd need vegtables and water and to have water we'd need water purifier. We could use a raft or two to catch some fish and to catch the fish we'd need harpoons or fishing rods, bait and hasks, we'd need a captain helper's and someone to keep up the morale like the Orange group. We'd need a communications group and a group to keep messages.

.... We would build a shelter and keep dry, make a look out tower so that we could see ships and some way of getting there attention. I would have some one to make the fires and take shifts of lookout, make wepons and hunt for food and would rashan what food we had. We could get fish nuts, berrys, mushrooms and I would keep dry and in touch at all times. We could explore and hunt for better food.

... (a) Get some way to protect us from someone or something.
(b) Find food and water.
(c) Have good spirit toward returning to safety.
(d) Have health check-ups
(e) Make shelter
(f) Provide communications between each other.

In response to the question, "During Moonvigil"why did Mission Control create three groups?" over a third of the pupils merely gave a specific description of the roles of Red, Blue and Orange groups. The responses of the remaining pupils fell into three categories.

TABLE 134

REASONS WHY THREE GROUPS CREATED

Response	Number and Percent Making Comment	
Specific description of roles of Red, Blue and Orange groups.	89	38
People would get mixed up if they didn't; do nothing; fight over jobs	52	22
Too much work for two groups; so people wouldn't get lazy	43	18
Insight into need for organization	34	14
Other	15	6
No answer	2	1
	235	

Examples of the reasons given by the children are:

SPECIFIC DESCRIPTION OF GROUPS

.... Red group was made to receive messages and decode (just to keep them from grouching.
Orange was formed to make sure nobody got sick down in the dumps.
Blue group was formed to give out food and write the log.

.... Well we needed a group to save our food or we'd never have enough. We needed our daily exercise and to make sure know one was hurt or sick. Finally, we had to have a group keeping daily reports, and decoding messages, Keeping records of all happenings.

.... Mission control created 3 groups for the most important jobs and little subjobs inside these groups. Red group was for communications from Mission Control. Blue group in charge of food units and Orange group for Health and Moral Reports.

MIXED UP/FIGHT OVER JOBS

.... They created 3 groups in order to have equal divisions of jobs and to halt chaos.

.... I think Mission Control created 3 groups because if they didn't everyone would of gotten mixed up and everything would of been a mess.

.... Because if they just had one or two groups it would not of worked cause they would never get finished the reports and everything would have been mixed up and there would not have been enough jobs for everyone to do.

TOO MUCH WORK

.... They created three groups because it would not be oginized if there were only 1 big group and no one would do anything. They created three groups so everyone would have something to do and everything would be done.

.... The created 3 groups that each person would get a special job and that they were all three things needed. I was in orange group I liked that group the most.

.... There was to many people in the blue and red group. Also only a few people were working and everyone else was justing standing around doing nothing. So when you brought out the orange group everthing was solved. Because everyone had a job. I thought that three groups was much much better than just two.

INSIGHT

.... I think the groups were created because they were needed. They also showed me personally how an institution functions within itself and how a system works. After seeing this, I realize how vital a communications group is and how much it matters if one little piece of the total work is not done. It is something like a machine - if one part is out of place the whole machine is wrecked. It also helps me see the problems confronted by my father who works in a huge new medical center. I understand now what he means by a lack of communication even in our tiny operation there was a lack of communication between the game.

Forty-four percent of the pupils felt that they would have created three groups to play the game, if they were mission control.

TABLE 135

NUMBER OF GROUPS PUPILS WOULD CREATE

Response	Number and Percent Making Comment	
One	5	2
Two	16	7
Three	100	44
Four - entertainment	8	3
Four - guard/supervise	18	8
Four - communications	16	7
Four - no specific role for fourth group	42	18
Other	22	10
No answer	2	1
	229	

Illustrations of what they would have the groups do follows.

THREE GROUPS

.... I would agree with the way they did it.

... The same three. Blue to be in charge of the food, red for code, etc., and orange for health and moral.

... If I were mission control I would not create any more groups because 3 groups are all that are needed.

FOUR GROUPS - SUPERVISION

.... I would create 4 groups one for health, one for reports, one for codes, and one for Mission Control.

FOUR GROUPS - NO SPECIFIC ROLE FOR FOURTH

.... I would create 4 groups because one group took care of little things that happen and that took be brown group and the rest of the group have the same color and the same jobs.

.... I would create 4 groups, the 3 groups just as we had and a forth group to take care of contamination.

.... If I were mission control I would have 4 groups with less in them. One would be red, and they would be health. One would be blue and do food units. I would have a orange group for communication. And purple group for aranging things.

The pupils' responses to the item "I liked the game because..." were coded in terms of ten categories as shown in Table 136.

TABLE 136

REASONS WHY PUPILS LIKED THE GAME

Response	Number and Percent Making Comment	
Fun - exciting/interesting/good experience, etc.	90	33
Informative - learn about Moon/survival, etc.	32	12
Learned to work in groups, liked groups, etc./ Co-operate	30	11
Realistic - like pretending, etc.	26	9
Liked following instructions/having things to do/jobs	22	8
Food - good	21	8
Change - "it was different" - Not School	19	7
Learned about organization/society, etc.	9	3
Learned about friends - gained insight, etc.	7	2
Liked TV, Loopie, Mission Control	3	1
Didn't like	7	2
Other	10	4
	276	

FUN

.... It was fun doing all those things. I like the health and morale.

.... It was interesting and fun.

.... It was fun and there was enuf to do.

.... It was fun we learned things and it was also fun because we were getting away from work in school . I like the food.

INFORMATIVE

.... You learn a lot of things about the moon you never new before and you learn some of the ideas that mission control had.

.... It was very interesting and it gave me some knowledge of space travel.

.... I learned something about how spacemen most likely feel when they are in space like we were and how they would feel being stranded out in space.

ORGANIZED

.... You learned how to oranize and work with people in the class you've never worked with and it was very exciting and edacational and you learnt how other people live.

.... It helped me in working together in a team. Helping me coroperate with others.

.... It was well organized and planned. It gave most people a good sense of responsibility and leadership. Also because everyone tried to simulate being on the moon and they tried to do things right to please the others.

.... I delt with troubles involving people to think. Also because it shows how to deal with problems that might come in life. It also showed companionship in each other.

.... It teaches people how to work in groups and how to work with each other.

TABLE 137

REASONS WHY PUPILS DISLIKED THE GAME

	Number and Percent Making Comment	
No cooperation	46	20
Boring; not enough to do	35	15
Food sticks	9	4
Not enough time	8	3
Didn't learn much	3	1
Didn't have any dislikes	24	10
Other	31	13
No answer	75	32
	231	

It is of interest to note that 42% of the pupils either did not answer this question or clearly indicated that they did not have any dislikes. Some illustrations of dislikes some pupils did have, are as follows:

NO COOPERATION

.... Of some people were arguing about what job they wanted to people where always arguing about handing out the food.

.... To many people in the crew fooled around.

.... First my group was kind of uncoropertive they played it wrong until I became navigator then we played right.

.... There was no fourth group to take care of troublesome people. I had trouble myself with a few stubborn, uncooperating people.

.... Some kids would just sit around doing nothing except have a space food stick watch the program and wear a button.

BORING NOT ENOUGH TO DO

.... There were too many people in some groups that some of them were doing nothing.

.... Their weren't enough jobs to go around so some people had to just sit around and watch thus, making them feel left out and then you lose interest in the whole project.

.... In some parts it was kind of boring and dull. And you couldn't do nothing with some people.

.... Sometimes there would be nothing to do.

.... It was boring and even though my job was writing out the daily log report I usually found myself with nothing to do most of the time.

OTHER

.... When the food was contaminated, you started to feel sick.

In response to the question, "What do you think the people who made Moonvigil wanted you to learn?" almost one-third of the responses coded fell in the category - cooperation, working together. The remaining categories are shown in Table 138.

TABLE 138

WHAT PUPILS THOUGHT WAS PURPOSE OF MOONVIGIL

Response	Number and Percent Making Comment	
Co-operation/work together	89	31
About the moon	52	18
How it feels to be stranded	44	15
Responsibility - self-discipline	27	10
Follow instructions, listen	24	8
About organizations	14	5
Learn - ourselves/others	7	2
Other	21	7
No answer	7	2
	285 *	

*More than one response coded for some pupils.

Examples of their answers to this question are:

CO-OPERATION

.... I think they wanted us to know how much we need one another depend on others and we also had to trust each other.

.... The people who made Moonvigil wanted us to learn to get along with classmates and if can work together.

.... I think the people of Moonvigil, wanted us to learn team-work and coperation. How to take orders from a person without feeling bossed around...

.... To work together in groups and to get along with everyone and to co-operate with the orders.

RESPONSIBILITY

.... I think the people who made Moonvigil are trying to learn how much the people can do on their own with out the teacher always helping you.

.... Yes I do think they wanted us to learn because we had to solve our own problems, learn to depend on ourselfs and not always another people.

.... I think they wanted you to learn how to figure out your own problems and to learn how to take on jobs and responsibilities.

HOW IT FEELS TO BE STRANDED

.... What the situation would be like if we were in their boots stuck on the moon.

.... I think the people who made Moonvigil wanted me to learn what to do if I was in a simmilal prosion.

ORGANIZATION

.... They wanted us to learn how to organize and if it worked well we would know how to organize in the future.

.... The promblems of our society today (the unknowns and the knowns.) How our society is organized.

> .... I think they wanted us to learn to always be organized because if you aren't there will be a mass of confusion and panic.

The pupils were asked to indicate how much they liked playing the game. Their response pattern is shown in Table 139.

TABLE 139

PUPIL ENJOYMENT

	Very much	Quite a lot	Alright/OK	Not too much	Not at all	
Number	119	63	41	1	5	229
Percent	52	27	18	.5	2	

Seventy-nine percent of the pupils indicated they enjoyed Moonvigil "very much" or "quite a lot".

To give additional insight, ten schools across the province were sent pupil diaries instead of questionnaires. Six schools returned completed diaries which are summarized in the following pages.

JUPITER ELEMENTARY SCHOOL

This class did a great deal of preparation for Moonvigil. They made spaceships, planets, radios and control panels and decorated their room with these. Several children did drawings to show what they are like. They are very proud of them. They all enjoyed Moonvigil enormously, and their interest held up very well. They found instructions difficult to understand at first, but seemed to enjoy the challenge of figuring them out. Leaders were apparently chosen for each group and these were usually the diary-writers. There are no specific acts of leadership described, and no conflicts between leaders and their groups. As a matter of fact, conflict of any kind was at a minimum in this class. Day 5 seems to have been a low point for most of the group, with considerable noise and confusion over hospitalization. On day 6 they were all happy to be back to "normal" and enjoyed exchanging jobs. There was very little intensive role playing in this group. They were playing a very stimulating game in their classroom. Debriefing days were very popular. The children enjoyed doing the interviews and reviewing what they had done during each of the Moondays. On debriefing day 3, several mentioned that "our teacher talked about rules, groups, erc". Reflection activities are being carried out on an individual rather than a group basis. One child is "doing" the YMCA, and another is doing "Garden River, because my Grandfather is the chief". The teacher is allowing them time to work on their projects daily.

VENUS ELEMENTARY SCHOOL

Most of the writers of these diaries (grade 8) appeared to enjoy the game, although almost all were beginning to be bored by day 6. Some complain about not having enough to do, and others about doing the same things over and over. One girl writer was very disappointed. Moonvigil was not what she thought it would be, and she was upset because her crew couldn't seem to get organized. Conflicts appeared in this group. "Everybody was roaming around bothering everyone else. People arguing over who'll do what and nothing accomplished. Nobody took it serious..." These things didn't seem to bother the other groups, although one writer commented that "It would be nice if the teacher could help when you get mixed up". They had some difficulty understanding instructions, but usually managed to straighten things out. There was extensive preinvolvement activity which is described in detail by one writer. "A few days ago the two groups split and we both made different things for the Moonvigil. Our group made a console around the T.V. so that it looked like a huge computer. Then we made a computer which is about 2 feet high and 4 feet long. Then all the research we had looked for we put on a tape recorder and put it into the computer so that it was almost real". There seemed to be no intensive role-playing, although most of the writers were interested in the UFO's and what happened to the Skylab crew. Debriefing day 1 was held on two days, the second seems to have been a repeat of the first. In several diaries the comment was made "We did the same today as yesterday". Debriefing day 2 was held according to the teachers' instructions. Some enjoyed it and others could not understand why it was being done. There are no comments about further debriefing or reflection.

MARS ELEMENTARY SCHOOL

This grade 5 class seems to have enjoyed Moonvigil for the most part, although some writers felt that it went on too long. One suggested having it every other day instead of every day. They seemed to have considerable difficulty understanding instructions, and on day 3 and day 4 the teacher stepped in to help clarify things. They all seemed to enjoy the exercises and give the impression of being a physically active class. There was a great deal of noise, and evidently the broadcasts were not attended to for the full ten minutes, but activities started as soon as Loopy gave instructions. Day 1 was a day of great confusion, and follow-up activities ran 20 minutes late. However as the days progressed they managed to speed up completion of their tasks. There seemed to be few conflicts within the groups. Preinvolvement activity is mentioned by one child very briefly, and was concerned with building "something". There did not seem to be too much effort at role-playing, although one boy complained on several days that he could not feel like a scientist because there was too much noise. Debriefing, particularly day 1 was enjoyed by most writers. The teacher made day 2 into a competitive game by having each crew keep track of how many questions their members could answer, and scoring points for each. On day 3 the teacher attempted to help the children generalize their experiences, and there are comments such as "we talked about why we were put in groups and about organizations", and "Today we just talked about different groups like Police Stations". There is no reference to reflection activities or projects in the diaries.

MERCURY ELEMENTARY SCHOOL

This grade 5 class did not enjoy playing Moonvigil. Some writers started enthusiastically but quickly petered out. They did not understand the instructions and could not figure out the codes. The groups were noisy and disorganized and leaderless as far as one can tell. Most of the writers disliked the foodsticks, and were sure they were making them sick. Only one group appeared to enjoy themselves for a few days, and they made up a game of their own. On day 3 they made a hospital. On day 4 they brought vitamin pills, peroxide, cough medicine, nivea cream and bandages. There are token gestures toward Moonvigil such as, "We got the codes but they didn't make sense". Several of the diaries are incomplete with no entries after day 5 or 6. Two diaries have entries on the debriefing pages. One said on day 1 "I liked it because we got to say our opinion". Day 2 "I didn't like it because we had a test", Day 3 "I liked it because we had a discussion." The other diary simply says on day 3 "We had good discussion".

SATURN ELEMENTARY SCHOOL

There does not appear to have been much pre-involvement activity in this grade 6 class, and it did not approach Moonvigil with a great deal of enthusiasm. The whole exercise was accompanied by much noise and fooling around. The teacher spoke to the boys at one point because they were "rude", and "the way they could boss themselves freely with nobody to tell them what to do". They seemed to have a lot of difficulty understanding instructions and there was a lot of argument over how things should be done. Some of the writers complained that they were bored and didn't have enough to do. Others said they had too much to do. There is no mention of leaders and no acts of leadership are described. Role playing was minimal. Most of the writers, however enjoyed debriefing. They discussed needs, and the need for structures and roles, and used "how" as an example, breaking it down into lawyers, prison, police, jury, judge and politicians. On reflection days their point of discussion was Civic Government, because there is an imminent election in the city. "We have been talking about the executive department. We found out who runs it, why they are there, how did they get there and what their duty is".

KRYPTON ELEMENTARY SCHOOL

Preinvolvement activities are not mentioned in the diaries of this grade 8 class, and were probably not carried out. Day 1 activities were very confusing for the children who made several mistakes such as handing out coding sheets to each child in Red group, thus leaving the group short of materials later in the week. Also the Blue group wrote highly imaginative accounts in their log for this day, rather than describing what actually happened. The teacher intervened at the end of the day to help them correct the mistakes. The level of attentiveness and involvement varies from writer to writer and from day to day. Several of the writers missed day 3 because the "instrumental" teacher comes only once a week and would not excuse them from his class. There were no conflicts over foodsticks, although there were some comments that they were not particularly enjoyed. One writer says, " It is a good idea to have real food, it makes the situation more real, and if there isn't enough food you realize this and try to conserve". This child also felt that the game was useful in teaching "responsibility". There are no conflicts described, although there appears to have been a minority of rather noisy disruptive children who were somewhat annoying to the more serious game-players. Several of the writers wanted to enter into serious role-playing but were discouraged by the lack of space "the gym would have been better", and by the look of things in the room to "really make you feel you were on the moon". Debriefing was enjoyed by most of the class, particularly day 1. Day 2, which was carried out in 2 days seems to have centred around a discussion of the things "we did wrong". Debriefing was interrupted by a field day, so that there is no record in the diaries (which the teacher was anxious to return on time) of any discussion of roles, structures, etc., and no indication as to whether follow-up activities were to be carried out.

Summary

The pupil questionnaires analyzed included approximately equal numbers of boys and girls who were in grades 5 - 10.

The pupils were approximately equally divided as to whether they felt afraid during the game that their crew would not be rescued from the moon. If they did feel afraid, it was primarily due to their concern about the food supply or the fact that the skylab crew was missing.

If stranded on an uninhabited island the pupils, as a group, would be concerned about the following - getting food, building a shelter, communications, organizing groups to look after various tasks, health, morale, making tools and exploring the island. Most pupils mentioned at least three or four of these.

Fifty-four percent of the pupils felt that Missison Control created three groups so that (a) people wouldn't get mixed up or fight over jobs, (b) there was too much work for two groups and (c) some had a deeper insight into the need for organization. When asked how many groups they would have created, 44% of the pupils said three - the same as Mission Control did.

One-third of the pupils said they liked the game because it was fun and interesting. Other pupils liked it because it was informative, they learned to work in groups, it was realistic, they liked following instructions.

Ten percent of the pupils reported that there was nothing they disliked about the game. An additional 32% did not answer this item and it could be inferred that they too had no special dislikes. The major reason given for disliking the game was a lack of co-operation among classmates.

Approximately one-third of the pupils felt that the people who created Moonvigil wanted them to learn about co-operation, working together, while 5% felt they wanted them to learn about organizations.

The pupils gave very high ratings for their enjoyment of the game, 79% said they liked it "quite a lot" or "very much".

CONCLUSIONS

Based on the evidence presented in this report, it is my opinion that Operation Moonvigil should be considered to be a success. The responding teachers, many of whom are not regular users of television in the classroom, would recommend Moonvigil to others and would play the game again. A majority of these teachers felt pupils achieved the objectives and it was worth the time and effort. They considered the game to be of high quality and felt it provided an interesting and enjoyable alternative to traditional classroom activities. This endorsement, based on broad experience with children in classrooms, indicates strong support.

However, the teachers also expressed some specific concerns regarding their pupils' skills at playing the game. They felt the children needed to develop television listening and reading for action skills. Secondly, and to an even greater degree, increased group interaction skills are required. For example, the teachers cite the difficulties encountered in trying to play the Space Navigation game since the pupils could not follow the T.V. or E.P. Kit instructions easily. Consequently the groups tended to engage in random play activities and dismiss this task. Many of the pupils expressed a lack of co-operative effort in groups as a major dislike in playing the game, thus substantiating the teacher's concern.

Another concern expressed by the teachers was that the game may be one or two days too long. Some teachers found the pupils becoming bored, with the result that they curtailed debriefing and reflection activities.

In terms of the above concerns, it is my conclusion that the children were required to develop the learning skills necessary to play the game, during the game. Therefore, there should be more preinvolvement activities prior to the game with at least several days break in-between. Since boredom was a product of the difficulties encountered, specific preparation may alleviate the problem.

According to the observers and the teachers' self-report, teachers had difficulty following the prescribed role as outlined in the Teacher's Guide. Some intervened to clarify instructions, so that the children would be able to accomplish their tasks. However, in a significant number of schools, it appears that intervention became interference while in other classrooms the role was interpreted to be so strictly passive that the pupils became frustrated. Teachers playing Moonvigil must become sensitive as to when to intervene and when to allow the pupils to solve the difficulties on their own initiative.

Based on the pupil data, the children enjoyed assuming the role of a crew stranded on the moon. They felt that they had acquired knowledge and the game was a change from usual classroom activities.

Turning to debriefing and reflection, although only a few pupils stated that the reason for playing Moonvigil was to learn about institutions, almost all pupils were able to identify at least three or four needs of a group stranded on a deserted island and were able to suggest corresponding roles. One can conclude that the children, as a group, reached the intermediate stage towards conceptualization in that they were able to transfer experiences learned in one specific situation to another. However, when pupil and teacher responses are compared, one can question the number of children who actually gained a full understanding of the concepts related to institutions in an abstract sense.

While it would appear that the program as it now exists can be played effectively, it is my recommendation that the teacher's workshop be modified to include (a) detailed study and discussion of the Teacher's Guide, (b) suggestions and materials for specific preinvolvement activities, and (c) experience which teachers can use to assist pupils to conceptualize. The workshop should also be mandatory so that teachers will be fully aware of the demands of the game and take steps to avoid conflicting activities during Moonvigil.

In summary, the Ontario Educational Communications Authority simulation game Operation Moonvigil has demonstrated that pupils, as active role-playing participants, can learn much of educational value about concepts related to institutions.

APPENDIX A

The
Ontario
Educational
Communications
Authority

1670 Bayview
Avenue
Toronto 352

November 9th, 1971.

Dear

You have already expressed interest in Operation Moon Vigil by your wish to participate in it with your class.

Operation Moon Vigil is one of our experimental programmes. It is unique in that, for the first time, television is being used as an integral part of the simulation game process. For these reasons we are most interested in assessing its effectiveness in classrooms throughout the Province.

As part of this evaluation, we are asking teachers and a few of their students to complete questionnaires and diaries. The teacher questionnaire will be sent to you under separate cover in approximately one week.

Please select six pupils, one from each of Red, Blue and Orange Groups in each of the two crews to complete the student diaries. Four of these pupils can be selected at the end of Day 1 and the two additional students at the end of the second day when the composition of the six groups has been determined.

We would be grateful if you could arrange sufficient time for the pupils to complete the diaries. Since independent responses are important, the pupil should complete the diary by himself with no communication with his peers who are completing theirs at the same time.

We have engaged an independent Consultant, Dr. A. E. Virgin, to conduct this evaluation for the Ontario Educational Communications Authority. Therefore, please return the diaries to him in the self-addressed envelope provided.

Since the report of this evaluation is to be utilized prior to the next telecast in January, it is most important to return the questionnaire and diaries by Friday, December 3, 1971.

Thank you for your assistance. Your descriptions and opinions, as well as those of your students, will be most helpful to us in this assessment of Operation Moon Vigil and in the course of our future programming.

Yours sincerely,
Anna Prodanou
ANNA PRODANOU,
PROJECT OFFICER.
RESEARCH AND DEVELOPMENT BRANCH.

TEACHER QUESTIONNAIRE

PLEASE COMPLETE THE QUESTIONS ON THE FOLLOWING PAGES IN AS MUCH DETAIL AS POSSIBLE; BE OPEN AND FRANK. IF THE SPACE PROVIDED IS NOT SUFFICIENT, PLEASE USE THE REVERSE SIDE OF THE PAGE. THE TEACHER'S GUIDE AND YOUR DAILY NOTES ON YOUR EXPERIENCES DURING MOON VIGIL WILL BE ESSENTIAL IN HELPING YOU TO ANSWER SOME OF THE QUESTIONS. RESPONSES ARE ANONYMOUS.

RETURN THE COMPLETED QUESTIONNAIRE TO RESEARCH AND EVALUATION SERVICES BY FRIDAY, DECEMBER 3, 1971.

(A questionnaire developed for the Ontario Educational Communications Authority).

1. WITH WHAT GRADE DID YOU USE OPERATION MOON VIGIL?

GRADE 5 ☐

GRADE 6 ☐

GRADE 7 ☐

GRADE 8 ☐

GRADE 9 ☐

OTHER ☐ ____________
please specify

2. IN WHAT TYPE OF ROOM WAS OPERATION MOON VIGIL HELD?

CLASSROOM ☐

OPEN AREA ROOM ☐

GYMNASIUM ☐

OTHER ____________
please specify

3(a) FOR THE PURPOSE OF PLAYING MOON VIGIL, HOW WOULD YOU RATE THE APPROPRIATENESS OF THE ROOM WHERE MOON VIGIL WAS PLAYED?

very suitable		alright/ not bad		not at all suitable
☐	☐	☐	☐	☐
1	2	3	4	5

(b) IF YOU SELECTED SQUARE 4 OR 5 ABOVE, PLEASE GIVE ANY SUGGESTIONS ABOUT HOW IT COULD BE MADE MORE SUITABLE.

____

____

____

____

____

____

____

4. PLEASE DRAW A DIAGRAM OF THE ROOM AS IT WAS SET UP TO PLAY MOON VIGIL. INCLUDE THE POSITION OF TV RECEIVER(S).

5. IS YOUR SCHOOL LOCATED IN:

CITY ☐ ____________________ *please name*

TOWN ☐ ____________________ *please name*

RURAL AREA ☐ ____________________ *please name*

6. HAVE YOU EVER PARTICIPATED AS A PLAYER IN A SIMULATION GAME?

YES ☐

NO ☐

7. HAVE YOU EVER CONDUCTED A SIMULATION GAME IN YOUR CLASSROOM?

YES ☐

NO ☐

8. COMPARED TO OTHER TEACHERS YOU KNOW, HOW WOULD YOU DESCRIBE YOUR TEACHING STYLE?

VERY PROGRESSIVE ☐
MODERATELY PROGRESSIVE ☐
MODERATELY TRADITIONAL ☐
VERY TRADITIONAL ☐
UNIQUELY DIFFERENT ☐

9. AT WHAT TIME DID YOU VIEW THE MOON VIGIL BROADCASTS?

9:30 A.M. ☐
1:50 P.M. ☐
2:50 P.M. ☐
VIA VIDEO TAPE AT ANOTHER TIME ☐

10. FROM WHAT SOURCE DID YOU FIRST LEARN OF MOON VIGIL?

MY PRINCIPAL ☐
ANOTHER TEACHER/ FRIEND ☐
O.E.C.A. (ETV) ADVERTISING ☐
DEPARTMENT OF EDUCATION REGIONAL OFFICE ☐
OTHER ______________________
please specify

11. ON THE AVERAGE, HOW OFTEN DO YOU USE TELEVISION AS A TEACHING TOOL, IN YOUR CLASSROOM?

NEVER ☐
SOMETIMES BUT LESS THAN ONCE A MONTH ☐
1-2 TIMES A MONTH ☐
3-4 TIMES A MONTH ☐
5 OR MORE TIMES A MONTH ☐

12. WHY DID YOU DECIDE TO USE MOON VIGIL? ______________________

13 DID YOU ATTEND A WORKSHOP SPONSORED BY OECA?

YES ☐

NO ☐

14. IF "YES", HOW HELPFUL WAS THE WORKSHOP IN PROVIDING YOU WITH A DEGREE OF (1) CONFIDENCE, (2) COMPETENCE FOR USING MOON VIGIL?

(1) high confidence — low confidence

high confidence				low confidence
☐	☐	☐	☐	☐
1	2	3	4	5

(2) high competence — low competence

high competence				low competence
☐	☐	☐	☐	☐
1	2	3	4	5

15. WHAT WERE THE MOST HELPFUL FEATURES OF THE WORKSHOP?

16. WHAT WERE THE LEAST HELPFUL FEATURES OF THE WORKSHOP?

17. HOW MUCH TIME DID YOU SPEND IN PRE-INVOLVEMENT ACTIVITIES WITH YOUR PUPILS?

ABOUT 1 HOUR ☐
OVER 1 HOUR TO 4 HOURS ☐
OVER 4 HOURS TO 8 HOURS ☐
OVER 8 HOURS ☐

18. WHICH OF THE FOLLOWING PRE-INVOLVEMENT ACTIVITIES DID YOU USE AND HOW INVOLVED WAS YOUR CLASS?

	Not used	1 little involved	2	3	4	5 very involved
i. CLASS DISCUSSION	☐	☐	☐	☐	☐	☐
ii. RESEARCH PROJECTS	☐	☐	☐	☐	☐	☐
iii. ROLE PLAYING	☐	☐	☐	☐	☐	☐
iv. GATHERING MATERIALS	☐	☐	☐	☐	☐	☐
v. MAKING MATERIALS	☐	☐	☐	☐	☐	☐
vi. OTHER ACTIVITIES ____ *please specify*		☐	☐	☐	☐	☐
____ *please specify*		☐	☐	☐	☐	☐

19. HOW HELPFUL WAS THE TEACHER'S GUIDE IN PROVIDING YOU WITH A DEGREE OF (1) CONFIDENCE (2) COMPETENCE FOR USING MOON VIGIL?

1. high confidence ... low confidence

high confidence				low confidence
☐	☐	☐	☐	☐
1	2	3	4	5

2. high competence ... low competence

high competence				low competence
☐	☐	☐	☐	☐
1	2	3	4	5

20. WHAT IS YOUR OPINION OF THE EMERGENCY PROCEDURES KIT AND ITS MATERIALS?

____

____

____

21. NOW THAT YOU HAVE PLAYED THE GAME, WHAT MIGHT YOU HAVE DONE, BUT DID NOT, IN THE PREPARATION STAGES WHICH WOULD HAVE FACILITATED PLAYING THE GAME?

____

____

____

____

____

22. DID THE INTEREST OF THE CLASS CHANGE DURING THE WEEK OF THE BROADCASTS?

interest increased		about the same		interest decreased
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

23. HOW MANY OF THE PUPILS IN YOUR CLASS CARRIED OUT THEIR DUTIES AS OUTLINED IN THE EMERGENCY PROCEDURES KIT?

most		about half		hardly any
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

24. WHAT WAS THE RESPONSE OF DIFFERENT STUDENTS WITH RESPECT TO THEIR INVOLVEMENT IN MOON VIGIL?

	very involved	involved	so-so	not too involved	not at all involved
HIGH ACADEMIC ACHIEVERS	☐	☐	☐	☐	☐
AVERAGE ACADEMIC ACHIEVERS	☐	☐	☐	☐	☐
LOW ACADEMIC ACHIEVERS	☐	☐	☐	☐	☐
HIGHLY MOTIVATED STUDENTS	☐	☐	☐	☐	☐
AVERAGE MOTIVATION	☐	☐	☐	☐	☐
LOW MOTIVATION	☐	☐	☐	☐	☐

25. PLEASE INDICATE IN TERMS OF THE OBJECTIVES SUGGESTED IN THE TEACHER'S GUIDE, THE DEGREE OF SUCCESS OF EACH SEGMENT OF MOON VIGIL, AND GIVE REASONS FOR YOUR RATING.

	very successful 1	2	3	4	complete failure 5
PRE-INVOLVEMENT	☐	☐	☐	☐	☐
MOON DAY 1	☐	☐	☐	☐	☐
MOON DAY 2	☐	☐	☐	☐	☐
MOON DAY 3	☐	☐	☐	☐	☐
MOON DAY 4	☐	☐	☐	☐	☐
MOON DAY 5	☐	☐	☐	☐	☐

	very successful				complete failure
MOON DAY 6	☐	☐	☐	☐	☐
MOON DAY 7	☐	☐	☐	☐	☐
DEBRIEFING	☐	☐	☐	☐	☐
REFLECTION	☐	☐	☐	☐	☐

26. ON THE AVERAGE, HOW MANY QUESTIONS DID THE PUPILS ASK YOU DURING EACH MOON VIGIL DAY PERIOD?

27. PLEASE GIVE EXAMPLES OF THE KINDS OF QUESTIONS MOST OFTEN ASKED.

1. ____________________
2. ____________________
3. ____________________
4. ____________________

28. APPROXIMATELY HOW OFTEN DID YOU INITIATE INTERACTION TO ASSIST PUPILS DURING EACH MOON DAY PERIOD?

MORE THAN 5 TIMES ☐
3-5 TIMES ☐
1 OR 2 TIMES ☐
HARDLY EVER OR NEVER ☐

29. WAS THERE A SPECIFIC NEED TO MODIFY THE GAME?

YES ☐
NO ☐

30. IF YES, PLEASE STATE THE SPECIFIC MODIFICATIONS MADE AND THE REASONS MADE.

____
____
____
____
____
____

31. IN YOUR OPINION, DID YOUR PUPILS ASSUME THE ROLES OF CREWS STRANDED ON THE MOON?

at all times		sometimes		never
☐	☐	☐	☐	☐
1	2	3	4	5

32. HOW DIFFICULT WAS YOUR ROLE AS OBSERVER DURING THE FIRST 7 DAYS?

very difficult				very easy
☐	☐	☐	☐	☐
1	2	3	4	5

33. IF YOU SELECTED SQUARES 1 OR 2 ABOVE PLEASE ELABORATE

34. WHEN YOU WERE DEBRIEFING OFFICER, WERE YOU ABLE TO LIMIT THE ROLE TO SEEKING INFORMATION AND ENABLING PUPILS TO EVALUATE THEIR EXPERIENCE?

always		sometimes		never
☐	☐	☐	☐	☐
1	2	3	4	5

35. IF YOU FOUND IT NECESSARY TO EXPAND THE ROLE, PLEASE DESCRIBE WHAT YOU DID AND WHY.

36. AS A GROUP HOW INVOLVED WERE THE CHILDREN IN PARTICIPATING IN THE DEBRIEFING DAYS?

very involved				not at all involved
☐	☐	☐	☐	☐
1	2	3	4	5

37. HOW MANY REFLECTION DAYS DO YOU PLAN TO HAVE?

1 ☐
2 ☐
3 ☐
4 ☐
more than4 ☐

38(a) PLEASE DESCRIBE WHAT WAS DONE DURING THE REFLECTION DAYS TO DATE AND WHAT PROJECTS EMANATED.

(b) PLEASE DESCRIBE WHAT FUTURE PROJECTS YOU EXPECT TO COMPLETE

39. WHAT WERE YOUR PERSONAL EXPECTATIONS FOR YOUR PUPILS DURING MOON VIGIL?

40. DID THE GAME FULFILL THESE EXPECTATIONS?

41. DID THE STUDENTS ACHIEVE THE OBJECTIVES OF MOON VIGIL AS OUTLINED IN THE TEACHER'S GUIDE? *(Please see section in Teacher's Guide, "What we want to have happen", for each Day).*

YES ☐
NO ☐

IF "NO", PLEASE ELABORATE

42. WAS THE TIME AND EFFORT OF PUPILS TO ACHIEVE THE OBJECTIVES AS OUTLINED IN THE TEACHER'S GUIDE WORTH THEIR WHILE?

43. WHAT KINDS OF CONCLUSIONS DID THE CLASS COME TO DURING DEBRIEFING AND REFLECTION SESSIONS?

44(a). DID THE CLASS DISCUSS THE CONCEPT OF INSTITUTIONS AS OUTLINED ON PAGE 13 OF THE TEACHER'S GUIDE ON THE REFLECTION DAYS? PLEASE ELABORATE.

44(b). DID THEY IDENTIFY OTHER INSTITUTIONS? PLEASE ELABORATE.

45. DID THE CLASS IDENTIFY THE NEED FOR SUCH INSTITUTIONS AND THE ROLES MEMBERS PLAY IN THEM? PLEASE ELABORATE

46. WOULD YOU CONSIDER USING MOON VIGIL AGAIN WITH ANOTHER CLASS?

YES ☐

NO ☐

QUALIFIED YES ☐

47. WOULD YOU RECOMMEND USING OPERATION MOON VIGIL TO OTHER TEACHERS?

YES ☐

NO ☐

48. WHY? ______________________________

49. WHAT ADDITIONAL INSIGHTS, IF ANY, DID YOU GAIN ABOUT YOUR STUDENTS, AS A RESULT OF PLAYING THE GAME?

____

50. WOULD YOU USE OTHER TELEVISION PROGRAMS WHICH PROVIDED A DIRECT COMPLEMENT FOR SPECIFIC CLASSROOM ACTIVITIES?

YES ☐

NO ☐

IF "YES", WHAT PARTICULAR KINDS OF PROGRAMS WOULD BE OF INTEREST TO YOU?

____

51. IF YOU HAVE ANY ADDITIONAL COMMENTS TO MAKE REGARDING MOON VIGIL PLEASE USE THIS SPACE.

THANK YOU VERY MUCH FOR YOUR CO-OPERATION.
PLEASE RETURN COMPLETED QUESTIONNAIRE TO

DR. A.E. VIRGIN,
RESEARCH & EVALUATION SERVICES,
23 BARWICK DRIVE,
DOWNSVIEW, ONTARIO.

APPENDIX B

QUESTIONNAIRE FOR PUPILS

(developed for the Ontario Educational Communications Authority)

NOW THAT YOU HAVE PLAYED THE GAME MOON VIGIL PLEASE ANSWER A FEW QUESTIONS FOR US. THIS IS NOT A TEST AND THERE ARE NO RIGHT OR WRONG ANSWERS. JUST ANSWER THE QUESTIONS AS BEST YOU CAN AND REMEMBER TO GIVE YOUR OWN THOUGHTS AND IDEAS. PLEASE GIVE YOUR TEACHER YOUR ANSWERS BY FRIDAY, DECEMBER 3. THANK YOU FOR HELPING US.

1. I AM A BOY ☐
   A GIRL ☐

2. I AM IN GRADE 5 ☐
   GRADE 6 ☐
   GRADE 7 ☐
   GRADE 8 ☐
   GRADE 9 ☐

3. HOW MUCH DID YOU LIKE PLAYING THE GAME?

very much	quite a lot	alright/ O.K.	not too much	not at all
☐	☐	☐	☐	☐
1	2	3	4	5

4. WHAT GROUP WERE YOU IN AT THE END OF THE GAME?
   RED ☐
   BLUE ☐
   ORANGE ☐

5. IF YOUR TEACHER SAID THE WORD "MOON VIGIL" TO YOU, WHAT WOULD YOU THINK OF?

6. AT ANY POINT DURING MOON VIGIL WERE YOU AFRAID YOU WOULD NOT BE RESCUED? WHY?

7. IF YOU AND A GROUP OF YOUR CLASSMATES WERE STRANDED ON AN UNINHABITED ISLAND AND COULD NOT BE RESCUED FOR SOME TIME, WHAT ARE SOME OF THE THINGS THE GROUP WOULD NEED TO DO?

8. DURING MOON VIGIL WHY DID MISSION CONTROL CREATE 3 GROUPS?

9. NOW THAT YOU HAVE PLAYED THE GAME, IF YOU WERE MISSION CONTROL, HOW MANY GROUPS WOULD YOU CREATE, AND WHAT WOULD THEY DO?

10. WHAT WERE SOME OF THE MOST IMPORTANT JOBS IN YOUR CREW DURING MOON VIGIL?

____

____

____

____

____

____

11. I LIKED THE GAME BECAUSE ______________________

____

____

____

____

____

____

____

12. I DISLIKED THE GAME BECAUSE ____________________

____

____

____

____

____

____

13. WHAT DO YOU THINK THE PEOPLE WHO MADE MOON VIGIL WANTED YOU TO LEARN?

____

____

____

____

____

____

____

____

____

APPENDIX C

PRELIMINARY INFORMATION

A. GRADE OF STUDENTS OBSERVED: _______

B. SEX OF TEACHER:

MALE ☐ FEMALE ☐

C. NUMBER OF BOYS IN CLASS: _______

NUMBER OF GIRLS IN CLASS: _______

D. DRAW A DIAGRAM OF THE ROOM AS IT WAS SET UP TO PLAY MOON VIGIL. INCLUDE THE POSITION OF TELEVISION RECEIVERS.

E. IN WHAT TYPE OF ROOM WAS OPERATION MOON VIGIL HELD?

TRADITIONAL CLASSROOM ☐

OPEN AREA ROOM ☐

GYMNASIUM ☐

OTHER ____________________
please specify

NOTE TO OBSERVERS

THE INSTRUCTIONS FOR EACH DAY SHOULD BE THOROUGHLY LEARNED BEFORE ANY OBSERVATIONS BEGIN. YOUR REPORT SHOULD BE WRITTEN AS SOON AFTER EACH SESSION AS POSSIBLE. REMEMBER TO BE FACTUAL AND OBJECTIVE. YOU WILL NOTE THAT MANY OF THE QUESTIONS HAVE ASTERISKS (*) BESIDE THEM. THESE QUESTIONS SHOULD BE ANSWERED IN MORE DETAIL THAN WOULD BE POSSIBLE DURING YOUR OBSERVATION SESSIONS. IT WILL THEREFORE BE NECESSARY FOR YOU TO KEEP NOTES OF YOUR OWN SO THAT ONCE YOUR SESSION IS OVER YOU WILL BE ABLE TO PROVIDE THE INFORMATION REQUIRED TO ANSWER THESE QUESTIONS. QUESTIONS REQUIRING A SIMPLE CHECK MARK MAY BE COMPLETED DURING EACH SESSION. FOLLOWING THE OBSERVER'S DAILY RECORD IS A SECTION WHERE YOU MAY WRITE YOUR MORE DETAILED REPORTS. WRITE AS MUCH AS YOU CAN REMEMBER ABOUT EACH POINT. USE THE SECTION "OBSERVER'S COMMENT" TO DESCRIBE ANY ADDITIONAL INFORMATION YOU THINK IS PERTINENT.

OBSERVER'S DAILY RECORD

MOON DAY 1

ON MOON DAY 1, MISSION CONTROL GIVES SOME BACKGROUND ON THE SCIENTISTS WHO HAVE CRASH LANDED ON THE MOON, PLUS INSTRUCTIONS FOR EACH CREW TO DIVIDE INTO TWO GROUPS RED AND BLUE AND PROCEDURES TO BE FOLLOWED AT THE CONCLUSION OF THE BROADCAST.

1. HOW MANY MINUTES PRIOR TO THE BROADCAST TIME DID THE TEACHER START THE GAME? ____________

2. WAS THE EMERGENCY PROCEDURE KIT SET UP BESIDE THE TV PRIOR TO BROADCAST?

   YES ☐

   NO ☐

3. WAS THE SCENERIO USED TO INTRODUCE THE GAME?

   YES ☐

   NO ☐

4. WAS THE TV PICTURE CLEAR?

   YES ☐

   NO ☐

5. WAS THE SOUND CLEAR?

   YES ☐

   NO ☐

6. WHAT WAS THE PUPILS' RESPONSE:

(A) DURING THE 5 MINUTES PRIOR TO BROADCAST

very involved — not at all involved

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

(B) DURING THE BROADCAST ITSELF

very attentive — not at all attentive

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

(C) DURING THE HALF HOUR OF FOLLOW UP ACTIVITIES

very involved — not at all involved

☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ 5

* ELABORATE: ____

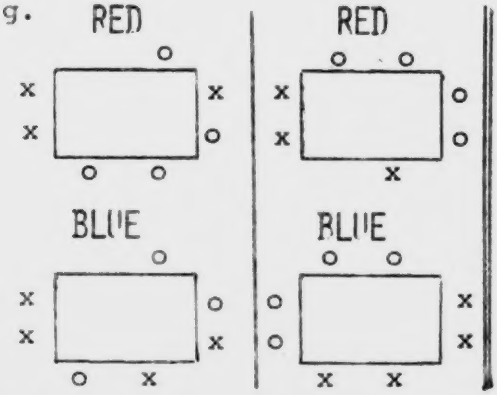
7. DID THE TEACHER DIVIDE THE CLASS INTO TWO CREWS BEFORE THE GAME BEGAN?

YES ☐

NO ☐

8. DRAW A DIAGRAM SHOWING THE RESULTING SEATING AND COMPOSITION FOR EACH OF THE FOUR GROUPS AS PER THE INSTRUCTIONS DURING THE BROADCAST.

e.g.



x = male
o = female

9. DURING THE TIME THE CREWS DIVIDED INTO GROUPS, DID PUPILS ASK THE TEACHER TO HELP?

YES ☐

NO ☐

10. DID HE/SHE PROVIDE HELP?

YES ☐

NO ☐

*11. IF SO, ELABORATE: ____________________

SELECT ONE CREW AND THEN SELECT ONE GROUP TO OBSERVE IN DEPTH. AT THE SAME TIME, BE AWARE OF THE OTHER GROUP. THE FOLLOWING ARE KEY THINGS TO WATCH FOR AND RECORD.

12. HOW MANY QUESTIONS DID THE PUPILS ASK THE TEACHER?

(a) OBSERVED CREW ____________

(b) OTHER ____________

*13. GIVE EXAMPLES OF THE KINDS OF QUESTIONS ASKED

____

14. WERE THE STUDENTS ABLE TO FOLLOW THE INSTRUCTIONS IN THE EMERGENCY KIT?

YES ☐

NO ☐

QUALIFIED YES ☐

*15. DESCRIBE THE INTERACTION RELATED TO OPENING THE EMERGENCY KIT AND READING AND ACTING ON THE INSTRUCTIONS.

____

*16. DESCRIBE THE TEACHER'S ROLE DURING DAY 1.

____

17(a). WERE THERE ANY OBVIOUS MODIFICATIONS OF THE GAME?

YES ☐

NO ☐

* (b). IF YES, DESCRIBE:

____

18(a). DID THE CHILDREN APPEAR TO ASSUME THE ROLES OF CREWS STRANDED ON THE MOON?

YES ☐

NO ☐

* (b). ELABORATE, DESCRIBING SPECIFIC EVIDENCE.

____

19(a). WERE THE PUPILS ENJOYING THEMSELVES?

YES ☐

NO ☐

* (b). ELABORATE:

____

*20. GIVE BRIEF DESCRIPTIONS OF ANY LEADERSHIP ACTS, DECISION-MAKING, CONFLICT SITUATIONS OR DISPLAY OF AVID ATTENTION (OR NOTICEABLE DISINTEREST).

____

OBSERVER'S DETAILED REPORT

MOON VIGIL DAY 1

1. PLEASE ELABORATE ON YOUR RATINGS OF THE ATTENTIVENESS AND INVOLVEMENT OF STUDENTS
   - (a) DURING THE 5 MINUTES PRIOR TO BROADCAST
   - (b) DURING THE BROADCAST
   - (c) DURING THE HALF HOUR OF FOLLOW-UP ACTIVITIES

2. DESCRIBE HOW MUCH AND WHAT KIND OF ASSISTANCE PUPILS REQUIRED TO DIVIDE INTO THE TWO GROUPS, RED AND BLUE, AND THE TEACHER'S ROLE IN ASSISTING, IF ASSISTANCE WAS REQUIRED.

3. WHAT KINDS OF ASSISTANCE DID THE STUDENTS REQUIRE DURING THE FOLLOW-UP ACTIVITIES AFTER BROADCAST ? GIVE EXAMPLES OF THE KINDS OF QUESTIONS ASKED AND THE DIFFICULTIES WHICH PROMPTED THEM.

4. DESCRIBE THE INTERACTION RELATED TO OPENING THE EMERGENCY KIT AND READING AND ACTING ON THE INSTRUCTIONS.

5. DESCRIBE THE TEACHER'S ROLE DURING MOON DAY 1.

7. ELABORATE ON HOW WELL THE CHILDREN ASSUMED THEIR ROLES AS CREWS STRANDED ON THE MOON. GIVE EVIDENCE TO SUPPORT YOUR JUDGEMENT.

8. EXPLAIN WHY YOU FELT THE STUDENTS ENJOYED OR DID NOT ENJOY THEMSELVES. GIVE EVIDENCE TO SUPPORT YOUR JUDGEMENT.

9. GIVE BRIEF DESCRIPTIONS OF ANY LEADERSHIP ACTS, DECISION-MAKING, CONFLICT SITUATIONS OR DISPLAYS OF CLOSE ATTENTION (OR NOTICEABLE DISINTEREST).

OVERHEARD COMMENTS - DAY 1

OBSERVERS' COMMENTS